

Environmental Monitoring Report

PUBLIC

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Semestral Report (July-December 2023)
January 2024**

Bangladesh: Dhaka and Western Zone Transmission Grid Expansion Project

Prepared by Power Grid Company Limited (PGCB), Government of Bangladesh for the Asian Development Bank (ADB).

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SEMI ANNUAL ENVIRONMENTAL SAFEGUARD MONITORING REPORT: DHAKA AND WESTERN ZONE TRANSMISSION GRID EXPANSION PROJECT



JULY- DECEMBER 2023

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ABBREVIATIONS

PGCB	:	Power Grid Company of Bangladesh (PGCB) Ltd.
DWZTGEP	:	Dhaka and Western Zone Transmission Grid Expansion Project
IEE	:	Initial Environment Examination
LILO	:	Line In Line Out
ECC	:	Environmental Clearance Certificate
DoE	:	Department of Environment
ADB	:	Asian Development Bank
SPS	:	Safeguard Policy Statement
RoW	:	Right of Way
ICNIRP	:	International Commission on Non-Ionizing Radiation Protection
EMF	:	Electro Magnetic Force
PMU	:	Project Management Unit
kWh	:	kilo Watt hour
MVA	:	Mega Volt Ampere
FY	:	Fiscal Year
GCC	:	General Conditions of Contract
SCC	:	Special Conditions of Contract
CESMP	:	Construction Environment and Social Management Plan
PPE	:	Personal Protective Equipment
GRM	:	Grievance Redress Mechanism
GRC	:	Grievance Redress Committee
CAP	:	Corrective Action Plan
DC	:	Deputy Commissioner
PIU	:	Project Implementation Unit
HFL	:	Highest Flood Level
EHS	:	Environment Health and Safety
FGD	:	Focus Group Discussion
FGL	:	Finished Ground Level
BIWTA	:	Bangladesh Inland Water Transport Authority
ECC	:	Environmental Clearance Certificate
GIS	:	Gas Insulated Switchgear
AIS	:	Air insulated Switchgear

EXECUTIVE SUMMARY

- i. The Dhaka and Western Zone Transmission Grid Expansion Project (DWZGEP) of a total investment of \$730.0 million will ensure that the capacity of electricity supply in Dhaka and western zone of Bangladesh is upgraded, with improvements in the technical efficiency of the transmission system. The proposed project is expected to provide support for the construction of new substations and transmission lines and support the improvements of the existing transmission network of PGCB. The DWZTGEF will also strengthen the power transmission system in southwest and northwest Bangladesh to enhance its reliability and efficiency. The project area comprises agricultural land, where, due to inadequate surface water supply, cultivation mostly depends on groundwater. Hence electricity demand is at its peak during the irrigation season. Furthermore, the electricity demand in the southwest is expected to rise in the near future with large scale industrialization expected as construction of the Padma Bridge has been completed. The subprojects of DWZTGEF are situated in five administrative divisions and twenty-one districts of Bangladesh, comprising construction of 15 new substations, ten overhead transmission lines and ten Line-In Line-Out (LILO) connections of a total length of 394 km overhead lines, 9.5 km underground lines in Dhaka, and bay extensions in 9 existing grid substations. All the subprojects are located in agricultural lands and in settlement areas. No ecologically sensitive habitats or national protected areas are found in the project area. According to the Environment Conservation Act 1995 and Environment Conservation Rules 2023 of Bangladesh, transmission lines more than 25 km are categorized as 'Red category' projects that require an Initial Environmental Examination (IEE) for site clearance and environment clearance. Environmental Clearance Certificate from Department of Environment has been issued on 28/07/2020 and renewed on 28/7/2023 that valid till 27/07/2024. According to the Environment Conservation Rules 2023 transmission lines (more than 25 km) is categorized as 'RED Category' project¹. The project also needs to comply with Asian Development Bank (ADB)'s safeguard requirements. IEE document has been prepared to fulfill environmental assessment requirements under ADB's Safeguard Policy Statement (SPS) 2009. IEE is updated and disclosed whenever any unexpected impacts or design changes occur during project implementation. The IEE study has been done based on both primary and secondary data. A composite and interdisciplinary approach has been developed for this study, based on the guidelines of DoE and ADB's SPS 2009. A scoping process was followed for identifying Important Environmental (IECs) and Social Components (ISCs), which are likely to be impacted by interventions of the project. Impacts to ecological resources will be minimal and localized in all phases of the project because there is no ecological or environmentally sensitive area. The Right of Way (RoW) of the transmission lines and the lands for the grid substations (GSs) are on low lying ground. Lands along the transmission lines are predominantly cultivated, at least in the dry season, and have homestead activities. Rice-based crops are grown mainly in the dry season along with potatoes, onions, mustard, garlic, jute and other vegetables. An area of 79.60 acres land in 15 new substations plus one existing substation and 1 acre of land tower footings, will be changed from the land type of agricultural use and fisheries. The proposed bay extensions would not require land acquisition as the required land extents are available within the existing GSs premises, except for Satkhira, which needs 3 acres for the bay extension. There will be minor impact of noise for short periods during construction of foundations for the transmission line towers and also result in temporary increase in traffic, but work will take place during daytime and residents close by will be warned of any foundation piling activity. The transmission and LILO lines will traverse some populated areas. Therefore, inspection of existing electromagnetic fields (EMF) along the selected routes of existing and new transmission lines in populated areas would be important. For housing structures, clearance between the transmission line and roof tops should be 6.5m-8m and for river crossings it will be 14.6m-15.9m which will be ensured through using towers of appropriate extensions. The estimated EMF values are within the ICNIRP public exposure limits. No houses or people will be directly affected by the EMF of transmission and LILO lines.

¹ Schedule 1, Environment Conservation Rules 2023

- ii. During the construction phase of the project, there will be some environmental impacts with machinery and vehicle movement for construction tower foundations, the erection of towers and stringing of conductors. Various activities will take place for towers and new GSs construction including land filling, storage of construction materials, activities of workers and movement of construction vehicles. Mitigation measures are proposed in the Environmental Management Plan (EMP) and is included in contracts to ensure that good practices are observed as per the measures identified in the EMP. PMU ensures that EMP is being strictly followed during the project implementation time.
- iii. A Grievance Redress Mechanism (GRM) has been established. The PGCB has set up a Project Management Unit (PMU) to implement the project. The implementation of EMP and CAP will be monitored to ensure the ADB's SPS 2009 will be met. This safeguard report highlights project progress details including any environmental and social safeguard issue.

Table 1: Project Information

Project Name: Dhaka and Western Zone Transmission Grid Expansion Project	
Executing Agency	Power Grid Company of Bangladesh (PGCB) Ltd.
Implementing Agency	Power Grid Company of Bangladesh (PGCB) Ltd.
Environment Safeguards Categorization	B
Environment Safeguards Documentation	IEE/Existing Facilities CAP/EMP
Project Stage Obtained	Design/Construction
Detailed Design Required Post-Approval	Design service is included in EPC contractor's scope, approval required from PGCB. Detailed design approved for following transmission line subprojects: 1. Satkhira Manirampur 2. Satkhira-Rupsha 3. Kushtia-Meherpur 4. Kaliganj-Maheshpur 5. Purba Sadipur-Domar 6. Domar-Hatibandha 7. Niamatpur-Patnitala 8. Gopalganj-Shibchar 9. Bagerhat-Pirojpur-Bhandaria Layout approved for following substation subprojects: 1. Kaliganj 400/230 kV Substation 2. Purbachal 400/230/132 kV Substation 3. Rupsha 230/132/33 kV substation 4. Phutola 132/33 kV Substation

	5. Manirampur 132/33 kV Substation 6. Meherpur 132/33 kV Substation 7. Maheshpur 132/33 kV Substation
Contract(s) Awarded	4 for transmission line construction (packages 1, 2, 3 and 4) and 4 for substation construction (packages 5, 6, 7 and 8) in total.
Bidding Document(s) Include EMP Cleared by ADB	8 bid documents (4 transmission lines & 4 substations) have been cleared by ADB so far.
Contract(s) Awarded Include EMP Cleared by ADB	YES, 4 for transmission line construction and 4 for substation construction
National Environment, Health and Safety Clearance(s) Obtained	YES, ECC is valid till 28/07/2024, further extension will be applied
Contractor(s) Given Access to Site	YES, 9 for transmission line construction and 7 for substation construction
Construction Progress (%)	Construction progress for following subprojects that have started on site: 1. Package-3: Tower foundation and erection works of Satkhira-Manirampur, Satkhira-Rupsha, Kushtia-Meherpur and Kaliganj-Maheshpur transmission lines are ongoing, overall progress is approximately 45% as of December 2023. 2. Package-4: Tower foundation and erection works of Gopalganj-Shibchar, Purba Sadipur-Domar, Niamatpur-Patnitala, Domar-Hatibandha and Bagerhat-Pirojpur-Bhandaria transmission lines are ongoing, overall progress is approximately 60% as of December 2023. 3. Package-5: Land development work at Kaliganj 400/230 kV substation will start by January, 2024. 4. Package-6: Land development at Purbachal 400/230/132 kV substation has started in November, 2023. 5. Package-7: Land development at Rupsha, Phultola, Manirampur, Meherpur and Maheshpur substations are ongoing, overall progress is approximately 10% as of December 2023. 6. Package-8: Minimal land development at Bhola, Bhanga and Shibchar substations has been done, overall progress is approximately 2% as of December 2023.

Unanticipated Impacts including Change of Scope or Design	Scope of package-1 has been reduced significantly, the draft bid document incorporating the revised scope has been cleared by ADB. Changes in alignment of routes for 2 transmission line contracts awarded, Addendum 1 to IEE has covered the following subprojects: 1. Satkhira-Manirampur 2. Gopalganj-Shibchar Addendum 2 to IEE is has covered the following subprojects: 1. Satkhira-Rupsha 2. Purba Sadipur-Domar 3. Niamatpur-Patnitala Addendum 3 to IEE is has covered the following subprojects: 1. Kushtia-Meherpur 2. Domar-Hatibandha 3. Bagerhat-Pirojpur-Bhandaria Addendum 4 to IEE is has covered the following subprojects (Updating as per ADB Comments ongoing): 1. Kaliganj- Maheshpur 132 KV Double Circuit Transmission Line 2. 230/132/33 KV GIS Substation at Rupsha 3. 132/33 KV GIS Substation Meherpur 4. 132/33 KV GIS Substation Manirampur 5. 132/33 KV GIS Substation Maheshpur and 6. 132/33 KV GIS Substation Phultola
Number of Site Inspections and Audits Undertaken by Environment Safeguards Staff in Reporting Period	6
Corrective Action Required from Previous Reporting Period	No
Outstanding Corrective Action this Reporting Period	No
Non-Compliances Recorded this Reporting Period	No major non-compliance was recorded in this reporting period
Corrective Action Required	YES
Number of Health and Safety Incidents	2 (minor)
GRM Functional	YES, GRM functional at construction sites of packages 3, 4, 5, 6, 7 and 8. For other packages, it will be made functional once the construction activity commences.

Number of Unresolved Grievances from Prior Reporting Period	0
Number of Grievances Received in Reporting Period	2 (all minor)
Number of Grievances Resolved this Reporting Period	2 (all resolved)
Number of Grievances Still Outstanding	0
Number of Grievances referred to Court of Law	0
Number of Grievances referred to the Accountability Mechanism	0

1 INTRODUCTION

1. The development policy framework of the Government of Bangladesh envisages sustainable development and moving towards a middle-income threshold by year 2021. The per capita income is rising steadily, from \$1,110 in 2014 to \$1,675 in 2018. The GDP growth rate in 2016 was 7.2% while in 2018, it further increased to 7.9%, meeting the national economic growth target of 7.0%. In contrast, the per capita grid electricity consumption in Bangladesh is only 336 kWh, which is lower than its neighboring countries. Electricity consumption is growing rapidly at an annual rate of over 6%, largely due to the growth in per capita income, increasing industrialization and the expansion of the agriculture and commercial sectors. Energy demand is expected to increase threefold by 2035 as the government rolls out connections to rural households and Bangladesh continues on a trajectory of strong economic growth. Electricity demand would need to increase to 33,708 MW by 2035 to meet the desired service quality and quantity projected under future growth. In the endeavor to become a high-income country by 2041, development of energy and power infrastructure is vital for Bangladesh.
2. The government's strategy is to promote power sector and it has embarked on implementation of a master plan to add low cost, base load power generation capacity to compensate for declining domestic gas production and replacement of expensive diesel and fuel oil-based power plants. It is providing subsidies, including for lifeline consumption, to support the objective of increasing electricity distribution to all parts of the country. For the energy sector, national targets include increased access to electricity, from 93% in 2018, and reaching 100% by 2021. Increase in per capita consumption, from 170 kWh in 2010 to a target of 514 kWh by 2020 is anticipated.
3. The Power Division, under the Ministry of Power, Energy and Mineral Resources (MPEMR) leads the power sector while the Bangladesh Energy Regulatory Commission (BERC) is the regulatory body which regulates electricity, gas, and petroleum sectors. The electricity sector is unbundled into generation, transmission, and distribution segments. Backbone transmission lines and substation network in the country are operated by the Power Grid Company of Bangladesh Limited (PGCB). As of December 2018, PGCB network comprised transmission lines operated at 400 kV, 230 kV and 132 kV voltage levels with a total length of 11,396 circuit km and 125 132/33 kV substations with a cumulative capacity of 20,211 MVA. Development of transmission and distribution network in line with generation has been identified as a key element of the power sector strategy in the 'Bangladesh Seventh Five Year Plan FY2016 – FY2020'. Development of an inter-region transmission network is required due to the unbalance in concentration of generation and demand, while local network expansions are required to cater to the increasing demand at new load centers. Due to the growing electricity demand, a considerable number of grid substations and transmission lines have already been overloaded. Therefore, urgent upgrades and expansions are required by PGCB to supply power to the key economic corridors in the southern and western regions including greater Dhaka area.
4. The Dhaka and Western Zone Transmission Grid Expansion Project (DWZTGEP) focuses on expanding the local transmission network to deliver electricity to new and expanding load centers while meeting the network operating criteria.
 - a) **Component 1: Transmission system in Greater Dhaka expanded.** The project will construct and commission substations with a total capacity of 4,450 MVA and 40 km of transmission lines in Greater Dhaka.
 - b) **Component 2: Transmission system in Western Zone expanded.** The project will construct and commission substations with a total capacity of 3,070 MVA and 368 km of transmission lines in the western zone.
 - c) **Component 3: Institutional Capacity of PGCB strengthened.** The project will enhance capacity by establishing a Drone Inspection Center within the operation and maintenance department of PGCB with some gender equality element.

1.1 Scope of the Project:

A. 400 kV Transmission Line: 02 km

- i. LILO of Ghorashal-Kaliganj-Purbachal-Bashundhara transmission line to Kaliganj and Purbachal: 01 km each
5. Previously this scope included construction of Kaliganj-Purbachal 400 kV transmission line (18 km). However, due to RoW issues on another project of PGCB, the scope has been revised and it has been decided that the Kaliganj-Purbachal line will be built by that project of PGCB as a part of Ghorashal-Kaliganj-Purbachal-Bashundhara line. Only connection from this line to Kaliganj and Purbachal substations will be made under DWZTGE Project, each connection will be 01 km, so 02 km in total. Hence scope has reduced significantly and there will be less environmental impact due to the scope reduction. Also, since Kaliakair-Bhulta 400 kV line has not been constructed yet, LILO of this line to Kaliganj has been excluded.

B. 230 kV Transmission Line: 138.5 km

- i. LILO of Tongi–Ghorashal 230kV double circuit line at Kaliganj: 3.5 km
- ii. Satkhira-Rupsha 230 kV double circuit line (initially charged at 132 kV): 62 km with 0.7 km river crossing line.
- iii. Purba Sadipur -Domar 230 kV double circuit transmission line (Initially Charged at 132kV): 46.5 km.
- iv. Gopalganj (N)-Shibchar 230 kV double circuit line (initially charged at 132 kV): 25 km with 0.4 km river crossing line.
- v. LILO of Rupsha Power Plant- Khulna (S) double circuit 230 kV Line at Rupsha Substation: 0.5 km
- vi. LILO of Barishal-Bhola-Borhanuddin double circuit 230 kV Line at Bhola substation: 1 km
6. Due to unavailability of required land, both Purbachal 400kV and 230 kV substations will be constructed in the same area. Hence lines connecting the substations (Purbachal 400 kV – Purbachal-2 230 kV double circuit underground cable line: 5km and River Crossing portion of Purbachal 400 kV – Purbachal-2 230 kV double circuit line: 0.5 km) will no longer be required.

C. 132 kV Transmission Line: 244 km

- i. Rampura-Bashundhara 132kV double circuit cable line: 11.0 km underground
7. Previously the route length was determined as 9.5 km. However, in order to avoid conflict with the under-construction metro line in the vicinity of the proposed route, the route has been revised slightly and route length has increased to 11.0 km. This has already been cleared by ADB in the bid document and TBER.
- i. Satkhira-Manirampur 132 kV double circuit line: 33 km
- ii. Kaliganj-Maheshpur 132 kV double circuit line: 28 km
- iii. Kushtia-Meherpur 132 kV double circuit line: 48 km
- iv. Niamatpur-Patnitola 132 kV double circuit line: 32.5 km
- v. Domar-Hatibandha 132 kV double circuit line: 35 km with 850 m river crossing line.
- vi. Bagerhat-Pirojpur-Bhandaria 132 kV double circuit line: 49.5 km with 1.3 km river crossing line.
- vii. LILO of Goalpara-Bagerhat 132 kV double circuit line at Rupsha: 3.5 km
- viii. LILO of Gopalganj-Gallamari 132 kV double circuit line at Rupsha: 0.5 km
- ix. LILO of Noapara-Khulna Central double circuit 132kV line at Phultola: 1 km
- x. LILO of Madaripur- Faridpur 132 kV double circuit line at Bhanga: 0.5 km
- xi. LILO of Barishal-Bhandaria double circuit 132kV line at Jhalokathi: 1.5 km

D. 400 kV Substation: 02 nos.

- i. 400/230/132 kV Indoor GIS Substation: Purbachal with 3×52/750 MVA 400/230 kV transformers and 2×350/450 MVA 230/132 kV transformers.

8. The original plan was to construct Purbachal 400/230 kV and Purbachal-2 230/132 kV substations at sites approximately 5.5 km apart. However, required land for Purbachal-2 substation could not be handed over by the concerned authority and hence both the 400/230 and 230/132 kV substations will be constructed in the premises of the 400/230 kV substation, and it will be a 400/230/132 kV substation.

- ii. 400/230 kV Indoor GIS Substation: Kaliganj (Gazipur) with 2×750 MVA 400/230 kV transformer (Future 132 kV Provision).

E. 230 kV Substation: 02 nos.

- i. 230/132/33 kV Indoor GIS Substation: Rupsha with 3x 250/350 MVA 230/132 kV and 3x80/120 MVA 132/33 kV transformer
- ii. 230/33 kV Indoor GIS Substation: Bhola with 2x120/140 MVA 230/33 kV transformer (Future 132 kV Provision)

F. 132 kV Substation: 10 nos.

- i. 132/33 kV Indoor GIS Substation: Phultola with 3x80/120 MVA 132/33 kV transformer
- ii. 132/33 kV Indoor GIS Substation: Manirampur with 2x80/120 MVA 132/33 kV transformer
- iii. 132/33 kV Indoor GIS Substation: Maheshpur with 2x80/120 MVA 132/33 kV transformer
- iv. 132/33 kV Indoor GIS Substation: Meherpur with 2x80/120 MVA 132/33 kV transformer
- v. 132/33 kV Indoor GIS Substation: Domar with 2x80/120 MVA 132/33 kV transformer (Future 230 kV Provision)
- vi. 132/33 kV Indoor GIS Substation: Hatibandha with 2x80/120 MVA 132/33 kV transformer
- vii. 132/33 kV Indoor GIS Substation: Jhalokathi with 2x80/120 MVA 132/33 kV transformer
- viii. 132/33 kV Indoor GIS Substation: Pirojpur with 2x80/120 MVA 132/33 kV transformer
- ix. 132/33 kV Indoor GIS Substation: Bhanga with 3x80/120 MVA 132/33 kV transformer
- x. 132/33 kV Indoor GIS Substation: Shibchar with 3x80/120 MVA 132/33 kV transformer (Future 230 kV Provision)

G. 132 kV Bay Extension: 20 nos.

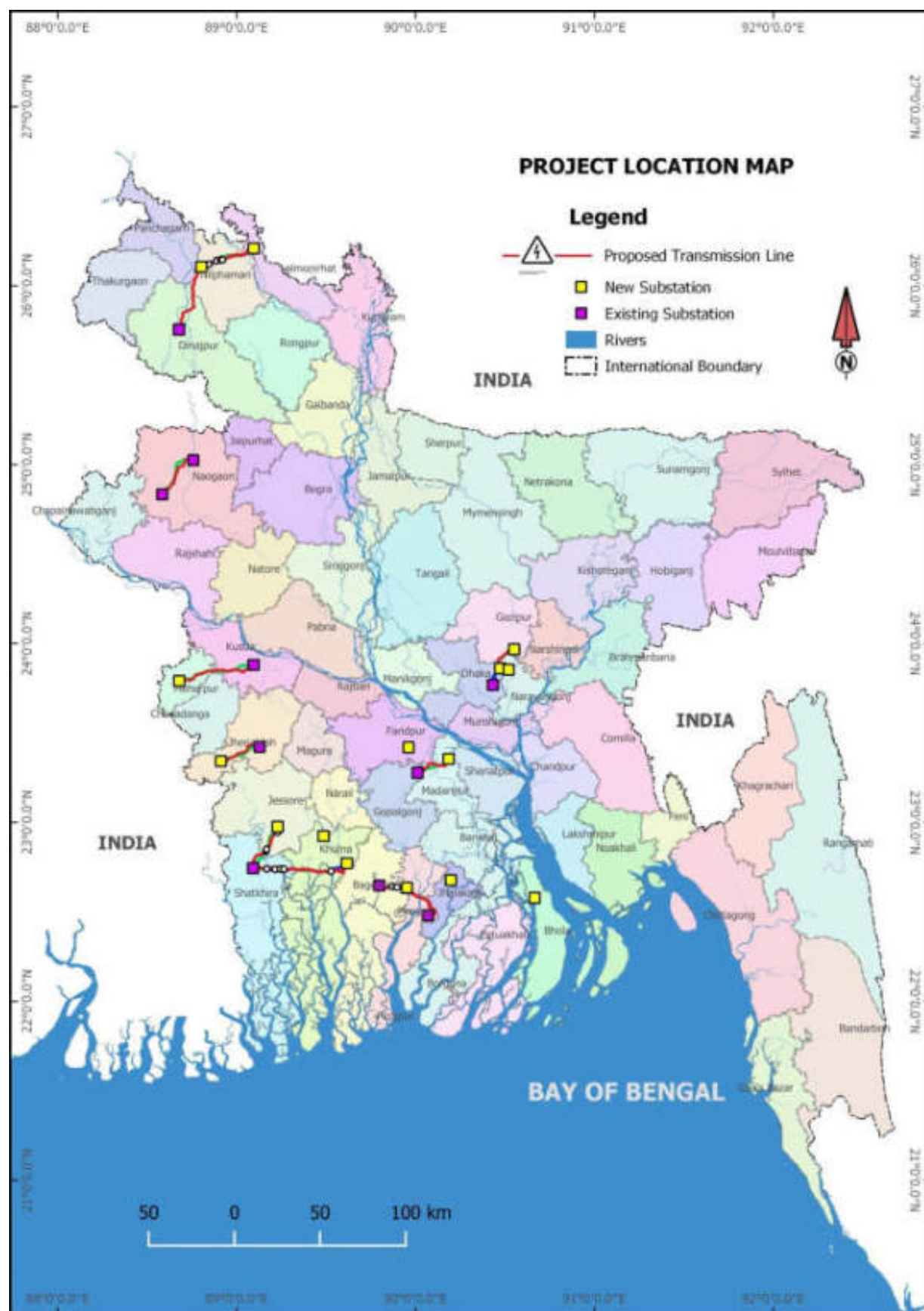
- i. 4 nos. 132 kV AIS Bay Extension at Satkhira Substation (Increase in bay extensions from 2nos. originally planned but there is no additional land required)
- ii. 2 nos. 132 kV AIS Bay Extension at Kaliganj Substation
- iii. 2 nos. 132 kV AIS Bay Extension at Patnitala Substation
- iv. 2 nos. 132 kV GIS Bay Extension at Niamatpur Substation (change from AIS due to lack of space)
- v. 2 nos. 132 kV AIS Bay Extension at Gopalganj Substation
- vi. 2 nos. 132 kV GIS Bay Extension at Bagerhat Substation (change from AIS due to lack of space)
- vii. 2 nos. 132 kV AIS Bay Extension at Kushtia Substation²
- viii. 2 nos. 132 kV GIS Bay Extension at Purba Sadipur Substation
- ix. 2 nos. 132 kV GIS Bay Extension at Bhandaria Substation

² It was incorrectly reported in the IEE as a GIS, but it has always been planned as an AIS.

9. Geographically, the project area is spread over 42 city corporations/municipalities/sub-districts of 21 districts of 5 administrative divisions of Bangladesh which are listed below:

Table 1-1: Project Administrative Area

Division	District	City Corporation/ Municipality/ Sub-District
Dhaka	Dhaka, Faridpur, Madaripur, Gazipur, Narayanganj, Gopalganj	Dhaka North City Corporation, Kaliganj, Rupganj, Bhanga, Shibchar, Madaripur Sadar, Moksedpur
Barishal	Pirojpur, Bhola, Jhalokathi, Patuakhali	Bhola Sadar, Jhalokathi Sadar, Mirzaganj, Pirojpur Sadar, Rajarpur, Bhandaria
Khulna	Bagerhat, Jashore, Jhenaidah, Khulna, Kushtia, Meherpur, Satkhira	Bagerhat Sadar, Fakirhat, Kachua, Rupsha, Batiaghata, Keshabpur, Manirampur, Kaliganj, Maheshpur, Dumuria, Phultola, Kushtia Sadar, Mirpur, Rajoir, Gangni, Meherpur Sadar, Satkhira Sadar, Tala
Rajshahi	Naogaon	Mahadebpur, Niamatpur, Patnitola
Rangpur	Dinajpur, Lalmonirhat, Nilphamari	Birganj, Kaharule, Khanshama, Hatibandha, Dimla, Domar, Nilphamari Shadar
5 (Five)	21 (Twenty-One)	42 (Forty-Two)



1.2 Project Implementation Status

10. Environmental Clearance Certificate from Department of Environment has been issued on 28/07/2020 which is valid till 27/7/2024. Application for further renewal of the ECC will be submitted before the deadline. Bid documents of each package contain SCC Clause -47 which makes the EMP part of the contract (see Annexure-4). Also, as per SCC Clause 9.8 c) of the bid documents of each package, the eligible contractor will not be allowed to start any physical work before submission and subsequent approval of CESMP (see Annexure-5). Links to approved CESMPs of packages-3, 4, 5, 6 and 7 are available as Annexure-6. Also progress status on implementation of environmental management activities shown in

Table 1-2: At a glance of component wise project scope and present status

Package	Description	Progress	Construction Progress	Expected Completion Date	Remarks on Performance
Package-1	400 kV and 230 kV LILO at Kaliganj & Purbachal	Financial evaluation completed, FBER sent for ADB's concurrence on 07/07/2023	Construction Activities has not started yet	-	-
Package-2	Rampura- Bashundhara 132kV double circuit underground cable line: 9.5 km underground + 1.5 km overhead	Contract signed with JV of TBEA and TBEA Luneng on 16/10/2022.	Preliminary route survey completed, reviewing and approval ongoing. About 5% work has completed till December 2023.	25/06/2025	-
Package-3	Satkhira-Rupsha 230 kV double circuit line (initially charged at 132 kV): 62 km with 0.7 km river crossing line, LILO of Rupsha Power Plant- Khulna (S) double circuit 230 kV Line at Rupsha Substation: 0.5 km, Satkhira-Manirampur 132 kV double circuit line: 33 km, Kaliganj-Maheshpur 132 kV double circuit line: 28 km, Kushtia-Meherpur 132 kV double	Contract signed with L&T, India on 09/05/2021. Now piling work and material	In Satkhira-Manirampur line, piling, piling cap and erection work have completed for 71, 59 and 25 towers respectively out of 101 approved tower	08/06/2024	Contractor started on site prior to clearance of IEE addendum. However,

Package	Description	Progress	Construction Progress	Expected Completion Date	Remarks on Performance
	circuit line: 48 km, LILO of Goalpara-Bagerhat 132 kV double circuit line at Rupsha: 3.5 km, LILO of Gopalganj-Gallamari 132 kV double circuit line at Rupsha: 0.5 km, LILO of Noapara-Khulna Central double circuit 132kV line at Phultola: 1 km	procurement is ongoing. IEE addendum-1 (draft) submission date: 18/04/2022 IEE addendum-1 (final) submission date: 23/08/2022 IEE addendum-2 (draft) submission date: 04/08/2022 IEE addendum-2 (final) submission date: 13/10/2022 IEE addendum-3 (draft) submission date: 10/10/2022 IEE addendum-3 (final) submission date: 30/03/2023	locations as of December 21, 2023. - In Satkhira-Rupsha line, piling, piling cap and erection work have been completed for 101, 64 and 43 towers respectively out of 153 approved tower locations as of December 21, 2023. - In Kushtia- Meherpur line, piling, piling cap and erection work have been completed for 121, 46 and 31 towers respectively out of 158 approved tower locations as of December 21, 2023. - In Kaliganj- Maheshpur line, piling and piling cap work has been completed for 74 and 47 towers out of 86 approved tower locations as of December 21, 2023. - About 45% work has completed till December 2023		necessary environmental baseline data was recorded before commencement of construction activities.

Package	Description	Progress	Construction Progress	Expected Completion Date	Remarks on Performance
		IEE addendum-4 (draft) submission date: 13/12/2023 Construction activity started: March 2022.			
Package-4	Purba Sadipur-Domar 230 kV double circuit transmission line (Initially Charged at 132kV): 46.5 km, Gopalganj (N)-Shibchar 230 kV double circuit line (initially charged at 132 kV): 25 km with 0.4 km river crossing line, LILO of Barishal-Bhola-Borhanuddin double circuit 230 kV Line at Bhola substation : 1 km, Niamatpur- Patnitola 132 kV double circuit line: 32.5 km, Domar-Hatibandha 132 kV double circuit line: 35 km with 850 m Teesta River Crossing, Bagerhat-Pirojpur-Bhandaria 132 kV double circuit line: 49.5 km with 1.0 km Katcha River Crossing & 300m Bhairab River Crossing, LILO of Madaripur- Faridpur 132 kV double circuit line at Bhanga: 0.5 km, LILO of Barishal-Bhandaria double circuit 132kV line at Jhalokathi: 1.5 km	Contract signed with Transrail Lighting, India on 30/06/2021. Now piling work and material procurement is ongoing. IEE addendum-1 (draft) submission date: 18/04/2022 IEE addendum-1 (final) submission date: 23/08/2022 IEE addendum-2 (draft) submission date: 04/08/2022	- In Gopalganj-Shibchar line, piling, piling cap and erection work have been completed for 59, 47 and 42 towers respectively out of 65 approved tower locations as of December 21, 2023. - In Purba Sadipur-Domar line piling and piling cap work have been completed for 85 and 62 towers respectively out of 89 approved tower locations.as of December 21, 2023. - In Domar - Hatibandha line, piling, piling cap and erection work have been completed for 54, 36 and 34 towers respectively out of 55 approved tower locations as of December 21, 2023.	28/08/2024	Contractor started on site prior to clearance of IEE addendum. However, necessary environmental baseline data was recorded before the commencement of construction activities. Baseline Data for all the TL under package-4 has been conducted and the report has

Package	Description	Progress	Construction Progress	Expected Completion Date	Remarks on Performance
		IEE addendum-2 (final) submission date: 13/10/2022 IEE addendum-3 (draft) submission date: 10/10/2022 IEE addendum-3 (final) submission date: 30/03/2023 Construction activity started: March 2022	- In the Niamatpur-Patnitala line, piling and piling cap work have completed for 50 and 2 towers respectively out of 89 approved towers locations as of December 21, 2023. - About 60% work has completed till December 2023		been added to annexure-15.
Package-5	400/230 kV Indoor GIS Substation: Kaliganj (Gazipur) with 2×750 MVA 400/230 kV transformer (Future 132 kV Provision)	Contract signed with China Electric Power Equipment and Technology (CET) Co. Ltd on 03/1/2022.	Land development work at Kaliganj 400/230 kV substation will start by January, 2024.	14/06/2025	CESMP has been approved and baseline data has been recorded.
Package-6	400/230 kV Indoor GIS Substation: Purbachal with 3×750 MVA 400/230 kV transformer & 230/132 kV Indoor GIS Substation: Purbachal-2 with 2×350/450 MVA 230/132 kV transformer.	Contract signed with China Electric Power Equipment and Technology	Land development at Purbachal 400/230/132 kV substation has started in December, 2023.	14/06/2025	CESMP has been approved and baseline

Package	Description	Progress	Construction Progress	Expected Completion Date	Remarks on Performance
		(CET) Co. Ltd on 03/1/2022.			data has been recorded.
Package-7	230/132/33 kV Indoor GIS Substation: Rupsha with 3x 250/350 MVA 230/132 kV and 3x80/120 MVA 132/33 kV transformer, 132/33 kV Indoor GIS Substation: Phultola with 3x80/120 MVA 132/33 kV transformer, 132/33 kV Indoor GIS Substation: Manirampur with 2x80/120 MVA 132/33 kV transformer, 132/33 kV Indoor GIS Substation: Maheshpur with 2x80/120 MVA 132/33 kV transformer, 132/33 kV Indoor GIS Substation: Meherpur with 2x80/120 MVA 132/33 kV transformer, Four nos. 132 kV AIS Bay Extension at Satkhira Substation, Two nos. 132 kV AIS Bay Extension at Kaliganj Substation, Two nos. 132 kV AIS Bay Extension at Bagerhat Substation & Two nos. 132 kV AIS Bay Extension at Kushtia Substation.	Contract signed with CMEC-CNEEC JV on 27/02/2022. IEE addendum-4 (draft) submission date: 13/12/2023	Land development at Phultola, Manirampur, Meherpur, Maheshpur and Rupsha is ongoing. About 10% work has completed till December, 2023.	18/01/2025	Approval of CESMP and baseline environmental data collection completed.
Package-8	230/33 kV Indoor GIS Substation: Bhola with 2x120/140 MVA 230/33 kV transformer (Future 132 kV Provision), 132/33 kV Indoor GIS Substation: Domar with 2x80/120 MVA 132/33 kV transformer (Future 230 kV Provision), 132/33 kV Indoor GIS Substation: Hatibandha with 2x80/120 MVA 132/33 kV transformer, 132/33 kV Indoor GIS Substation: Shibchar with 3x80/120 MVA 132/33 kV transformer (Future 230 kV Provision), 132/33 kV Indoor GIS Substation: Bhanga with 3x80/120 MVA 132/33 kV transformer, 132/33 kV Indoor GIS Substation: Jhalokathi with 2x80/120 MVA 132/33 kV transformer, 132/33 kV Indoor GIS Substation: Pirojpur with 2x80/120 MVA 132/33 kV transformer, Two nos. 132 kV AIS Bay Extension at	Contract signed with Energypac-CSEPD Consortium on 23/06/2022.	Minimal land development at Bhola, Bhanga and Shibchar substations has been done. About 2% work has completed till December, 2023.	28/02/2025	Revised CESMP and the collected baseline data is yet to be submitted formally by the contractor.

Package	Description	Progress	Construction Progress	Expected Completion Date	Remarks on Performance
	Patnitala Substation, Two nos. 132 kV AIS Bay Extension at Niamatpur Substation, Two nos. 132 kV AIS Bay Extension at Gopalganj Substation, Two nos. 132 kV GIS Bay Extension at Purba Sadipur Substation & Two nos. 132 kV GIS Bay Extension at Bhandaria Substation.				
Package-10	Procurement of Drones	NoA issued in 12/11/2023.	-	-	
S-2	Consultancy for Drones Legislation implementation	Contract signed on 08/10/2021	-	-	
S-3	Consultancy for External Social Monitoring.	Contract signed on 15/03/2022	-	-	

Table 1-3: Progress on implementation of environmental management activities

Activity	DWZTGEP Packages							
	P-1	P-2	P-3	P-4	P-5	P-6	P-7	P-8
Monitoring and Reporting								
Monthly Report	N/A	√	√	√	√	√	√	x
Quarterly Report	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Semi-annual Report	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Environmental Quality Monitoring								
Air Quality	N/A	x	√	x	√	√	√	x
Noise Level	N/A	x	√	x	√	√	√	x
Surface Water Quality	N/A	x	√	x	√	√	√	x
Groundwater Quality	N/A	x	√	x	√	√	√	x
Soil Quality	N/A	x	√	x	√	√	√	x

2 COMPLIANCE TO NATIONAL REGULATIONS

11. The Environment Conservation Act of 1995 establishes the requirement for an environmental assessment in Bangladesh. Any proposed "industrial unit or project" must obtain prior approval from the Department of Environment (DoE). The act has classified projects to be assessed by the DoE in four categories (Green, Yellow, Orange and Red). Electrical infrastructure projects involving transmission lines longer than 25 km are categorized as Red category, which triggers an automatic requirement for an IEE. Environmental Clearance Certificate from Department of Environment has been issued on 28/07/2020 and is valid till 27/07/2023. Application for further renewal of the ECC will be submitted before deadline.
12. Land acquisition for substations is done in accordance with the Acquisition and Requisition of Immovable Property Act, 2017 according to which the DC of the respective district determines the compensation amount for lands to be acquired as well as trees, crops, vegetation etc. situated in that land. Project office deposits the money to the DC who is authorized by law to distribute the compensation amount among the affected people. Under the DWZTGE Project, 79.6 acres of land in 15 places has been acquired and compensation amount for all of the acquired sites as determined by the DC has been deposited by the project office. In all cases, all the concerned people have been notified properly as per the requirements of the law and the project office has deposited the compensation amount as determined by the DC.
13. During the construction of transmission lines, losses to the vegetation and plants are inevitable. The concerned owners are compensated as per rates provided by the local agriculture office. Project office has collected the rates from the local agricultural offices. Also, the transmission lines will cross several water bodies for which permission from Bangladesh Interim Water Transport Authority (BIWTA) has been obtained.

Table 2-1: Compliance to ECC Requirements

SI No	ECC Requirement	Compliance Status	Remarks
1	The activity under this Project shall not result in the loss of containment of any materials that would affect health or will have damaging impact on the environment or natural resources.	Complied	All harmful material is being contained and disposed properly.
2	Proper and adequate sanitation facilities shall be ensured in labor camps throughout the proposed Transmission Pipeline construction program.	Complied	Proper sanitation has been ensured by the respective contractors.
3	No solid waste can be burnt in the project area. An environment friendly solid waste management should be in place during whole the period of the project in the field.	Complied	No wastage is burnt. All the waste/excess material is collected and recycled/disposed properly.
4	Proper and adequate on-site precautionary measures and safety measures shall be ensured so that no habitat of any flora and fauna would be demolished or destructed.	Partially complied	No habitat of any fauna is harmed. However, there are some losses to the flora during the construction phase for which proper compensation to the owners have been ensured.

SI No	ECC Requirement	Compliance Status	Remarks
5	All the required mitigation measures suggested in the EMP report along with the emergency response plan are to be strictly implemented and kept operative/ functioning on a continuous basis.	Complied	EMP is a part of the contract for every contractor and being followed strictly.
6	To reduce dust, spraying of water over the earthen materials should be carried out from time to time.	Complied	Water is being sprayed on stored construction material to avoid dust generation.
7	Resettlement plan should be properly implemented, and people should be adequately compensated.	Complied	Proper compensation has been ensured.
8	After the construction work, topsoil should be properly restored. No wetland should be filled up.	Complied	No wetland is being filled up. Topsoil has been transferred to nearby agricultural lands.
9	Construction material should be properly disposed of after the construction work is over.	Complied	Construction waste being properly collected and disposed.
10	As described in the report environmental monitoring should be strictly followed and monitoring report should be shared with DOE to ensure the environmental management properly.	Complied	The monitoring report is being shared with DoE annually during renewal of the ECC.
11	At the time of commissioning of the Transmission line and other facilities utmost precautionary measures should be taken to reduce the possibility of accident.	Will be complied	Public announcement will be made before electrically charging any facilities.
12	The Environmental Management Plan (EMP) included in the EMP Report shall strictly be implemented and kept functioning on a continuous basis.	Complied	EMP is a part of the contract for every contractor and being followed strictly.
13	In case of any emergency, the following information shall immediately be reported to Headquarter of the Department of Environment (DOE) simultaneously. a. Nature of incident (fire, accident, collision, etc.) b. Personnel affected (injured, missing, fatalities, etc.) c. Emergency support available and its location (standby transport, medical facilities, etc.) d. Weather conditions e. Current operations (abandoning the site, firefighting, etc.)	Will be complied	Will be reported in case of any emergency.

SI No	ECC Requirement	Compliance Status	Remarks
14	All pollution incidents shall be reported immediately and simultaneously to the nearby Office of the Department of Environment.	Will be complied	Will be reported in case of any incident.
15	Full and adequate utilization of the techniques for mitigation of pollution and environmental damage as well as that for treatment of wastes shall be ensured.	Complied	Pollution and environmental damage measures have been ensured.
16	On completion of the Transmission line and other construction. The project authority shall hand-over and leave the land to the actual landowner in a replenished condition in terms of fertility and topography.	Will be complied	Land will be handed over to the landowners after commissioning of transmission lines in a ready to cultivate condition.
17	All parameters of effluent, gaseous emission, noise, solid waste, hazardous waste etc. shall be within the limits in the Environment Conservation Rules (ECR) 1997 and amendment 2023. In case of non-coverage of ECR, the World Bank Environment, Health and Safety Guideline shall be adhered to.	Complied	Adherence to the relevant standard being ensured.
18	Rehabilitation of human settlement or compensation for any sort of activity which will incur damage or loss of public or private property, or any natural resources shall be addressed as per Government of Bangladesh rules and regulations	Complied	Govt. rules are being followed.
19	No activity of cutting/razing/dressing of hill or hill land is endorsed under this clearance without due permission/clearance of the concerned authority of the Government of Bangladesh.	Complied	The project's geographic locations do not have any hills.
20	Appropriate permission would be required to obtain from the forest department in favor of cutting/felling of any plant/tree/sapling forested by any individual or government before doing such type of activity.	Will be complied	Permission will be requested whenever there is any such requirement.
21	Power Grid Company of Bangladesh Ltd (PGCB) shall extend active cooperation to DOE officials to facilitate their visit to the site as and when necessary.	Complied	DoE officials are always welcomed to visit sites and offices.

2.1 Compliance to Environmental Covenants from the ADB Loan Agreement

14. Environment: PGCB is complying with (a) all applicable laws and regulations of ADB relating to environment, health, and safety; (b) the Environmental Safeguards; (c) all measures, and

requirements set forth in the IEE, EMP and CAP, and any corrective or preventative actions set forth in a Safeguards Monitoring Report.

15. Land Acquisition and Involuntary Resettlement: PGCB is complying with (a) all applicable laws and regulations of the Borrower relating to land acquisition and involuntary resettlement; (b) the Involuntary Resettlement Safeguards; and (c) all measures, and requirements set forth in the RP, and any corrective or preventative actions set forth in the Safeguards Monitoring Report. Under this project, lands that are only used for cultivation in the dry season are being acquired. Therefore, there is no resettlement under this project.
16. Tribes, Minor Races, Ethnic Sects and Communities: PGCB ensures that the Project does not have any Tribes, Minor Races, Ethnic Sects and Communities Safeguards impacts.
17. Safeguards Related Provisions in Bidding Documents and Works Contracts: Bid documents of each package contains SCC Clause-47 which makes the EMP part of the contract (Annexure-4). Also, as per SCC Clause 9.8 c) of the bid documents of each and every package, the eligible contractor will not be allowed to start any physical work before submission and subsequent approval of CESMP (Annexure-5). Links to approved CESMPs of packages 3, 4, 5, 6 and 7 are available in Annexure.
18. Labor Standards, Health and Safety: PGCB has included specific provisions in the bidding documents and contracts financed by ADB under this Project requiring that the contractors, among other things: (a) comply with the Borrower's applicable labor law and regulations and incorporate applicable workplace occupational safety norms; (b) do not use child labor; (c) do not discriminate workers in respect of employment and occupation; (d) do not use forced labor; (e) allow freedom of association and effectively recognize the right to collective bargaining; and (f) disseminate, or engage appropriate service providers to disseminate, information on the risks of sexually transmitted diseases, including HIV/AIDS, to the employees of contractors. These requirements are added in the bid document as SCC 22.2.7 and GCC 22.2 (Annexures 7 & 8).

Table 2-2: Compliance to Environmental Covenants

Schedule #, Para. #	Covenant	Compliance Status	Remarks
Schedule 4, Para. 10	<u>Environment</u> : The borrower shall or shall cause PGCB to ensure that the preparation, design, construction, implementation, operation, and decommissioning of the Project and all Project facilities comply with (a) all applicable laws and regulations of the Borrower relating to environment, health, and safety; (b) the Environmental Safeguards; (c) all measures and requirements set forth in the IEE, EMP and CAP, and any corrective or preventative actions set forth in a Safeguards Monitoring Report.	Being complied	Project preparation, design, construction, implementation, operation, and decommissioning are complying with all applicable laws and regulations.
Schedule 4, Para. 11	<u>Land Acquisition and Involuntary Resettlement</u> : The borrower shall or shall cause PGCB to ensure that all rights-of-way required for the Project are made available to the Works contractor in accordance with the schedule agreed under the related Works contract and all land acquisition and	Being complied	Necessary RoW are being made available to the contractors as per work schedule following all applicable laws

Schedule #, Para. #	Covenant	Compliance Status	Remarks
	resettlement activities are implemented in compliance with (a) all applicable laws and regulations of the Borrower relating to land acquisition and involuntary resettlement; (b) the Involuntary Resettlement Safeguards; and (c) all measures and requirements set forth in the RP, and any corrective or preventative actions set forth in the Safeguards Monitoring Report.		and regulations. There will be no resettlement under this project and the requirements of RP and safeguard reports are being followed properly.
Schedule 4, Para. 12	Without limiting the application of the Involuntary Resettlement Safeguards or the RP, the borrower shall or shall cause PGCB to ensure that no physical or economic displacement takes place in connection with the Project until: (a) compensation and other entitlements have been provided to affected people in accordance with the RP; and (b) a comprehensive income and livelihood restoration program has been established in accordance with the RP.	Being complied	This project will not require any resettlement.
Schedule 4, Para. 13	<u>Tribes, Minor Races, Ethnic Sects and Communities</u> : The borrower shall or shall cause PGCB to ensure that the Project does not have any Tribes, Minor Races, Ethnic Sects and Communities Safeguards impacts. If the Project does have any such impacts, the borrower shall or shall cause PGCB to take all steps required to ensure that the Project complies with the applicable laws and regulations of the Borrower and with the SPS.	Being complied	This project will not have any impact on any Tribes, Minor Races, Ethnic Sects and Communities
Schedule 4, Para. 14	Human and Financial Resources to Implement Safeguards Requirements: The borrower shall make available or cause PGCB to make available necessary budgetary and human resources to fully implement the EMP and the CAP.	Being complied	Both PGCB and the contractors have human and financial resources to implement the respective responsibilities of EMP and CAP.
Schedule 4, Para. 15	<u>Safeguards Related Provisions in Bidding Documents and Works Contracts</u> : The borrower shall or shall cause PGCB to ensure that all bidding documents and	Being complied	All the provisions are included in bidding and

Schedule #, Para. #	Covenant	Compliance Status	Remarks
	contracts for Works contain provisions that require contractors to: (a) comply with the measures relevant to the contractor set forth in the IEE, the EMP, the CAP, and the RP (to the extent they concern impacts on affected people during construction), and any corrective or preventative actions set forth in a Safeguards Monitoring Report. (b) make available a budget for all such environmental and social measures. (c) provide the Borrower and PGCB with a written notice of any unanticipated environmental, resettlement or tribes, minor races, ethic sects and communities risks or impacts that arise during construction, implementation or operation of the Project that were not considered in the IEE, the EMP and the RP. (d) adequately record the condition of roads, agricultural land and other infrastructure prior to starting to transport materials and construction; and (e) reinstate pathways, other; local infrastructure, and agricultural land to at least their pre-project condition upon the completion of construction.		contract documents.
Schedule 4, Para. 16	Safeguards Monitoring and Reporting: The Borrower shall do the following or shall cause PGCB to do the following: (a) submit semi-annual Safeguards Monitoring Reports to ADB and disclose relevant information from such reports to affected persons promptly upon submission. (b) if any unanticipated environmental and/or social risks and impacts arise during construction, implementation or operation of the Project that were not considered in the IEE, the EMP and the RP, promptly inform ADB of the occurrence of such risks or impacts, with detailed description of the event and proposed corrective action plan. (c) no later than 90 days after the Effective Date, engage qualified and experienced external expert under a selection process	Being complied	Submitting Semi Annual Safeguard Monitoring Report submitted to ADB. There was no unanticipated environmental and/or social risks and impacts occurred during construction

Schedule #, Para. #	Covenant	Compliance Status	Remarks
	and terms of reference acceptable to ADB, to verify information produced through the Project monitoring process, and facilitate the carrying out of any verification activities by such external experts. (d) report any actual or potential breach of compliance with the measures and requirements set forth in the EMP of the RP promptly after becoming aware of the breach.		
Schedule 4, Para. 17	Prohibited List of Investments The Borrower shall and shall cause PGCB to ensure that no proceeds of the Loan are used to finance any activity included in the list of prohibited investment activities provided in Appendix 5 of the SPS.	Being complied	Loan amounts are used only for payment of approved contract components.
Schedule 4, Para. 18	<u>Labor Standards, Health, and Safety:</u> The Borrower shall and shall cause PGCB to ensure that the core labor standards and the Borrower's applicable laws and regulations are complied with during project implementation. The Borrower shall cause PGCB to include specific provisions in the bidding documents and contracts financed by ADB under the Project requiring that the contractors, among other things: (a) comply with the Borrower's applicable labor law and regulations and incorporate applicable workplace occupational safety norms. (b) do not use child labor. (c) do not discriminate against workers in respect of employment and occupation. (d) do not use forced labor. (e) allow freedom of association and effectively recognize the right to collective bargaining; and (f) disseminate, or engage appropriate service providers to disseminate, information on the risks of sexually transmitted diseases, including HIV/AIDS, to the employees of contractors Schedule engaged under the Project and to members	Being complied	Appendix-7 and 8

Schedule #, Para. #	Covenant	Compliance Status	Remarks
	of the local communities surrounding the Project area, particularly women.		
Schedule 4, Para. 19	The Borrower shall cause PGCB to strictly monitor compliance with the requirements set forth in paragraph 17 above and provide ADB with regular reports.	Being complied	Monitoring of all relevant compliances in all project sites.

2.2 Compliance to Project Administration Manual (PAM)

19. Environment (category B): The project is classified as environmental category B as it is a transmission system improvement project, which will not pass through any ecologically sensitive area and will not bring significant adverse environmental impacts that are irreversible, diverse or unprecedented. An initial environmental examination (IEE) has been prepared in accordance with ADB's Safeguard Policy Statement (2009) and GoB legislation. The project environmental impacts from overhead line, underground cable and substations have been adequately assessed and mitigation measures have been developed that are commensurate to the impacts in separate EMPs. Meaningful consultations were undertaken to reflect the opinions and views in alignment selection and impacts mitigation stages.
20. Climate Change: The climate change impact of the project is categorized as medium. Climate risk vulnerability assessment (CRVA) has been conducted and the CRVA results have been incorporated into the project design. In addition, the project contributes to climate mitigation by using high efficiency transmission lines.
21. Involuntary resettlement (category A): The substations have been carefully designed to be constructed in the lands that are used for cultivation only in the dry season. Therefore, there is no resettlement under this project. The overhead transmission lines have temporary impacts for crops and permanent impacts for trees and land under four tower legs. Underground lines will follow the right of way of existing roads without having resettlement impacts.
22. Indigenous Peoples (category C): - The project does not affect dignity, human rights, livelihood systems or culture and territories of Indigenous Peoples.
23. Gender and Social Dimensions: The project is categorized as having some gender elements. Under the PRC Fund grant for procurement of Drones, the project will directly support women's employment in the Drone Inspection Center in PGCB. The project will also generate jobs for local communities during construction as a direct benefit. Further, contractors will carry out HIV/AIDS awareness activities for their laborers at work sites, which will be monitored by the construction supervision consultants. PGCB will ensure that contractors adequately provide health and safety measures for the construction workers and further ensure that bidding documents include clauses on how contractors will address this, including an information and awareness raising campaign for construction workers on sexually transmitted diseases, including HIV/AIDS and human trafficking (see Annexures 7 & 8).

Institutional Setup of PGCB for Implementation of EMP:

24. Contract Department of PGCB is responsible for preparing the bid document, tender invitation, bid evaluation and contract award. They have ensured the inclusion of relevant EMP clauses in the bid document of each and every package which has been reviewed and confirmed by ADB. During implementation of the project, the PIU is responsible for overall supervision, monitoring, reporting and enforcing the EMP through the implementing contractors. Setup of the PIU is attached as Annexure-15. PGCB's Social and Environmental Unit (ESU) will provide the internal expertise

support while PGCB appointed consulting firm (EQMS Consulting Ltd.) will provide the external expertise required for the overall implementation of the EMP.

Table 2-3: Safeguard personnel in DWZTGEP

Project Implementing Bodies	Name	Designation	Email Address	Contact Number	Roles
1. PGCB	Md. Abul Kashem	Project Director	Pd.dwztgcp@pgcb.gov.bd	01709997858	Primary Contact Person
	Rezwan Ahmed Khan	Sub-Divisional Engineer	Rezwan07.pgcb@gmail.com	01708465492	Alternate Officer
2. Consultant	Abdul Halim	Team leader	abdul.halim@eqms.com.bd	01719708440	Supervision and review
	Sadman Khaled Monsur	Deputy Team Leader	sadman.monsur@eqms.com.bd	01711373678	Supervision and review
	Mehedi Hasan	Coordinator and Social Expert	hasan.mehedi@eqms.com.bd	01719216910	Reporting and Monitoring
	Sk Abid Md Saad	Environmental Officer	abid.saad@eqms.com.bd	01884636764	Reporting and Monitoring
3. Contractors	S Ganesh Kumar	EHS Officer (P-3)	ganeshs@Intecc.com	01762920185	Primary Contact Person
	Deepak Yadav	EHS Officer (P-4)	deepak.yadav@transraillighting.com	01316709382	Primary Contact Person
	Sohel Rana	EHS Officer (P-5 and 6)	sohelranaeee76@gmail.com	01743883846	Primary Contact Person
	Ge Wenbo	EHS Officer (P-7)	gewenbo@cneec.com.cn	01922360325	Primary Contact Person
	Md. Moniruzzaman	EHS Officer (P-8)	monirbdenergypac@gmail.com	01708453320	Primary Contact Person

2.3 Grievance Redress Mechanism

25. GRM is a locally based, project-specific way to deal with and resolve complaints and grievances faster and thus enhance project performance standards in terms of environmental, social and resettlement management. The fundamental objectives of the GRM, implemented through a Grievance Redress Committee (GRC) are to resolve any environmental and resettlement related grievances in consultation with the aggrieved party to facilitate smooth implementation of environmental and resettlement plans and establishes accountability of the affected people.
26. A GRC (Annexure-9) is formed to receive and resolve complaints as well as grievances from aggrieved persons from the local stakeholders including the Project-affected persons. Based on consensus, the GRC will help to resolve issues/conflicts amicably and quickly, saving the aggrieved persons from having to resort to expensive, time-consuming legal actions. The procedure will, however, not prevent a person's right to go to the courts of law.
27. The established GRC will function throughout the life cycle of the project implementation and PGCB will ensure its accessibility to affected parties and transparency and efficiency in grievance resolution. However, it will not deal or interfere with any matters which are already placed before the country's courts of law. The Project will provide publicity for the GRC established using a variety of media such as brochures and leaflets printed in Bengali and through community level awareness raising programs.
28. Contractors of packages 3, 4, 5, 6, 7 and 8 have set up signboards/banners in every construction site which lets the people know about the ongoing activities. Complain logbooks are made available

at each site. PGCB and EQMS Ltd., the consultant arranges regular formal/informal discussion sessions with the local mass to inform them about the GRC and know how people are feeling about the ongoing construction activities. The general vibe among the common people is very positive and they are eager to experience better-quality electricity in their area. EQMS has distributed leaflets within the vicinity of the construction areas in order to make people aware of the GRC.

As of now no issue regarding grievances has been raised to the GRC.

2.4 Compliance to Environmental Management Plan

29. EMP has been prepared for the substation and transmission line subprojects. It describes the anticipated impacts, monitoring requirements, and development of mitigation measures with respect to the following stages: (i) pre-construction, (ii) construction, and (iii) operation and maintenance. Detailed, site-specific mitigation measures and monitoring plans are developed and are being implemented throughout the project implementation phase.
30. EMP for the project identifies feasible and cost-effective mitigation and remediation measures to be taken to reduce potential significant, adverse impacts to acceptable levels. Here, proper mitigation measures are proposed for each potential impact, including details of responsible parties for implementation of the mitigation measures and the associated monitoring program.
31. Environmental monitoring reports are being submitted to ADB on a semi-annual basis during construction phase, while on an annual basis during operation basis by PGCB. If any of the safeguard requirements that are covenanted in the legal agreements are found not to be satisfactorily complied, an appropriate corrective action plan (CAP) will be developed and implemented as agreed upon with ADB to rectify unsatisfactory safeguard compliance.

2.5 Tree Plantation Status

There have been no stringing activities that occurred in both package 3 and 4 during the reporting period. For this no trees have been cut till December 2023. Moreover, among 15 substation sites, 13 had no trees. 2 sites had trees for which proper compensation has been paid and owners have been allowed to cut and take those trees. Also, a comprehensive tree plantation for Package 8 mentioned in Table 2-6. There is some voluntary tree plantation initiated during reporting semester which are not a part of the tree plantation plan. Tree plantation for package 8 will be initiated after the construction of the substations. A comprehensive Tree Plantation Plan for Package 1-7 will be incorporated after receiving the inventory of tree species cut down from EPC contractor.

Table 2-4: Details of compensatory tree planation program as of July- December 2023 for Package 1-7

Package	Tree plantation plan (TPP) prepared (Yes/No)	No. of trees planned to cut	Trees planned to replant as per TPP	No. of trees removed (as of December 23)	Trees planted (as of December 23)	Types of species planted	Plantation completion status	Survival status	Remarks
Package- 1	NA	NA	NA	NA	NA	NA	NA	NA	NA
Package-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
Package-3	NA	4952	NA	NA	180	NA	NA	NA	NA
Package-4	NA	21386	NA	NA	100	NA	NA	NA	NA
Package-5	NA	NA	NA	NA	NA	NA	NA	NA	NA
Package-6	NA	NA	NA	NA	NA	NA	NA	NA	NA
Package-7	NA	NA	NA	NA	NA	NA	NA	NA	NA
Package-8	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 2-5: Details of compensatory tree planation program as of July- December 2023 for Package 8

Name of the Substation	Type of Trees	No. of Trees	Compensation Amount (BDT)	Compensation Payment Status	Remarks
Jhalokathi	Banana	676	3,53,550	Paid through DC office along with land acquisition compensation.	Annexure 33
	Papaya	80			
	Hog Plum	32			
	Mango	56			
	Jackfruit	46			
	Olive	15			
	Date	20			
	Blue Berry	12			
	Eggplant	22			
Bhola	Mahogany	36	8,26,492		
	Rain Tree	45			

Table 2-6: Comprehensive tree plantation for Package 8

Name of the Substation	Type of Trees	No. of Trees Cut	No of Trees Need to be Planted	No of Planted Trees (July-December 2023)	Location of Tree Plantation	Plant Health Update	Remarks
Jhalokathi	Banana	676	2028	NA	NA	NA	Annexure 33
	Papaya	80	240	NA	NA	NA	
	Hog Plum	32	96	NA	NA	NA	
	Mango	56	168	NA	NA	NA	
	Jackfruit	46	138	NA	NA	NA	

Bhola	Olive	15	45	NA	NA	NA
	Date	20	60	NA	NA	NA
	Blue Berry	12	36	NA	NA	NA
	Eggplant	22	66	NA	NA	NA
	Mahogany	36	108	NA	NA	NA
	Rain Tree	45	135	NA	NA	NA

Table 2-7: EMP for substations

Item	Requirement or Mitigating Measures	Corrective Action	Compliance Status	Remarks
Land acquisition/ requisition	The landowner should be paid before the land acquisition	Before land acquisition, any kind of site development activities should be prohibited	Complied	No site development activities were initiated before land acquisition or requisition.
Topsoil	Chemical spills should be avoided	The secondary container should be used properly	Will be complied once substation construction starts	
Cutting of trees/Clearing of vegetation	No major trees were found on the site	Green belt and garden will be developed in operation phase	Will be complied with after the completion of the construction phase	
Fauna (Wildlife)	Not required	Not required	Not required	
Construction waste	Waste should be disposed in proper segregation manner	Waste should be disposed in a segregation manner and removed by the proper authority	Will be complied once substation construction starts	
Drainage congestion and flooding	No major issues regarding drainage congestion and flooding were not found	Surface height should be more than local and regional flood level	Substation FGL will be 500mm higher than the HFL.	
Noise level	Advance machineries should be used	Proper maintenance of the machineries	Will be complied once substation construction starts	
Air quality and dust	Spraying water during construction phase	Vehicular movement should not exceed more than 20 km per hour	Will be complied once substation construction starts	
Soil quality	Chemical and oil spillage should be avoided	Secondary container should be used under all chemical and oil drum	Will be complied once substation construction starts	

Item	Requirement or Mitigating Measures	Corrective Action	Compliance Status	Remarks
Siting of construction camps	Safe drinking water, food, first aid and fire safety equipment should be available	Proper sanitation should be maintained	Will be complied once substation construction starts	
Traffic congestion/road accident	Congestion can be avoided by proper distribution of traffic scheduling	Proper lighting, signal flag and safety tapping should be used in excess road and site	Being Complied	Proper lighting, signal flag (during traffic movement) and safety tapping (around the construction equipment and materials) are well maintained in every site where site development and construction activities initiated
Pollution due to Wastes	All types of waste should be stored in segregated manner (Waste inventories are depicted in (Annexure 22))	All types of stored waste should be removed regularly	Will be complied once substation construction starts	
Community H&S	Regular monitoring of excess way	Excessive Traffic movement at a time should be avoided	Being Complied	Traffic movements are controlling through proper scheduling and limited speed
Occupational H&S	All types of PPE should be available for workers	Using of PPE should be monitored strictly in project site	Being Complied	During pre-work briefing PPE ensured for the workers and also monitored during the work activities by HSE concern of contractors
Physical cultural resources	Not required	Not required	Not required	

Item	Requirement or Mitigating Measures	Corrective Action	Compliance Status	Remarks
Employment generation/income	Privilege should be given to the local community while recruiting	Provide proper training to the recruited manpower. Local vehicles are being hired for movement of man, machine and material.	Being Complied	Local manpower hired and trained for the certain activities.

Table 2-8: EMP for Transmission Lines

Item	Requirement or Mitigating Measures	Corrective Action	Compliance Status	Remarks
Tree felling/ Clearing of vegetation	Owners to be properly compensated	The compensation to local people being handed over by the contractor which will be reimbursed by PGCB	Being complied	Compensation for land requisition and clearing for vegetative are well disbursed to the owner (Annexure-10)
Requisition of Land	Landowners must be notified and properly compensated.	No land is being acquired for transmission lines. For tower erection, landowners are being compensated as per law.	Being complied	
Fauna (wildlife)	Owners to be properly compensated	The compensation to local people being handed over by the contractor which will be reimbursed by PGCB	Being complied	
Construction Waste	To be removed from the site by the Contractor for proper disposal	The contractor ensures generation of minimum construction debris. Whatever wastage generated, is collected, separated and removed from site by the contractor.	Being complied	Construction debris and other wastes (Plastic, paper, etc.) are safely removed from the site regularly (Annexure-11)
Noise level	Noise generation to be kept at a minimum level not to disturb the local community.	All construction activities and movement of vehicles are done only in the daytime (9AM to 5PM).	Being complied	All types of construction work and vehicular movement shut down after 5 pm.

Item	Requirement or Mitigating Measures	Corrective Action	Compliance Status	Remarks
Air quality and dust	Dust generation to be kept at a minimum level to ensure air quality	Proper covering and spray of water to be ensured in construction sites.	Being complied	Construction materials are covered properly and frequent spraying of water are well maintained in dry season(Annexure-12)
Soil quality	Prevention of Spillage and leakage of liquid at tower sites	Diesel and lubricants of generators and winching machines are captured from all dripping points	Being complied	Secondary containers are used to avoid oil and chemical spillage
Siting of construction camps (if needed for tower construction)	Consent from landowners is required, proper compensation to be provided and the surrounding environment to be protected.	Camps are set up in empty lands and far from any water body/stream. Contractor pays rent/compensation to the landowners.	Being complied	Proper consent are taken from the owners and compensation are reimbursed to the owners.
Traffic congestion/ road accident	Traffic congestion to be controlled to avoid any traffic accident	Control of traffic during movement of construction vehicles ensured.	Being complied	Traffic movement and speed are controlled properly by the flag man (Annexure-13)
Pollution due to wastes	Solid waste to be properly cleared-off.	Contractor to have a functional waste management plan and clear-off all the wastes immediately after completion of works.	Being complied	Contractors remove wastes from all the site before leaving (Annexure-23)
Community H&S	Safety barriers and warning signs surrounding the tower construction sites	Safety signs should be available at all construction sites.	Being complied	Safety signs are available at all sites (Annexure-24)

Item	Requirement or Mitigating Measures	Corrective Action	Compliance Status	Remarks
Occupational Health and Safety	Health and Safety measures for the construction workers to be ensured	Proper protective gears (PPE), caution sign and demarcation of construction sites to be ensured.	Being complied	Proper PPE and Safety signs are ensured at the construction sites (Annexure-14)
Employment generation/ income	Employ local people, especially PAPs, for the tower construction activities as much as possible.	Local people should be employed. Also, local vehicles are being hired for movement of man, machine and material.	Being complied	Local people and vehicle are being hired as much as possible

3 ENVIRONMENTAL SUPERVISION AND MONITORING RESULTS

Table 3-1: Environmental Supervision

SN	Date	Type and Purpose of the visit	Location (s) visited	EA, Consultant staff participating	IA, Remarks
1.	12.11.2023-13.11.2023	Physical visit/survey; Environmental Inspection and Social Survey of the route; EHS inspection at Substation	Satkhira-Manirampur	EQMS experts, Contractor EHS staff and PGCB representative	Inspection was done for the proposed 132kV transmission route from Satkhira to Manirampur
2.	10.11.2023-11.11.2023	Physical visit/survey; Environmental Inspection and Social Survey of the route; EHS inspection at Substation	Satkhira-Rupsha	EQMS experts, Contractor EHS staff and PGCB representative	The inspection was done for the proposed 230kV transmission route from Satkhira to Rupsha
3.	18.07.2023-19.07.2023	Physical visit/survey; Environmental Inspection and Social Survey of the route; EHS inspection at Substation	Gopalganj and Shibchar	EQMS experts, Contractor EHS staff and PGCB representative	The inspection was done for the proposed 230kV transmission route from Gopalganj (N) to Shibchar
4.	25.11.2023-26.11.2023	Physical visit/survey; Environmental Inspection and Social Survey of the route; EHS inspection at Substation	Purba Sadipur-Domar	EQMS experts, Contractor EHS staff and PGCB representative	The inspection was done for the proposed 230kV transmission route from Purba Sadipur to Domar
5.	27.11.2023-28.11.2023	Physical visit/survey; Environmental Inspection and Social Survey of the route; EHS inspection at Substation	Domar-Hatibandha	EQMS experts, Contractor EHS staff and PGCB representative	The inspection was done for the proposed 132kV transmission route from Purba Sadipur- Hatibandha
6.	08.11.2023-09.11.2023	Site Inspection and FGD of the route; EHS inspection at Substation	Kaliganj-Maheshpur	EQMS experts, Contractor EHS staff and PGCB representative	The inspection was done for the proposed 132kV transmission route from Kaliganj-Maheshpur

Table 3-2: Budget for EMP Implementation

Item	Budgeted Amount	Spend to Date / Remarks
Tree Planting	As per price schedule of individual packages	No claim for payment submitted by the contractors till date
Contractor's EMP Cost		
EMoP Laboratory Analysis		

3.1 Labor Management

32. For the construction of the project, all the workmen are engaged by contractor and the necessary amenities is provided as per applicable rules and regulations.

33. The contractor has maintained and followed the health and safety guidelines of WHO during the construction phase. In addition, the Contractor have close contact with the nearest hospitals and community clinic for any emergency.

3.2 Waste Management

Waste Management for the substations, store and construction sites are depicted in following Table 3-3.

Table 3-3: Waste Management practice

Location	Key wastes	Collection Method	Disposal Options
Substations, store and construction sites	- Paper, Polythene bags, Plastics and wood - Food waste,	Segregated Dustbins	- Authorized Third Party Waste Collector. - Municipal Authority
Substations, store and construction sites	Waste oil, spent oil, grease, paint/thinner, diesel, lubricants, chemicals, Natural fiber ropes	Closed Container with Warning label for hazardous waste and Rest all in Dustbin	- Authorized Collector for Hazardous Waste. - Municipal Authority
Substations and construction sites	E-waste (Light, Transformer, Switchgear, etc.), Metal waste, and metal wire	- Store and store yard - Will be segregated and stored on an impervious surface in a quarantine area. These will be disposed of as per the local legal requirements.	- Authorized Third Party Waste Collector. - Municipal Authority
Substations, store and construction sites	Medical waste like cotton, bandages, soiled bandages, etc.	Black Color polythene inside a close lid plastic container	To be sent to Authorized Hospital in a closed, labeled polythene bag for further disposal.

Also, contact details of the waste collector authority are mentioned in below Table 3-4.

Table 3-4: Information of Waste Collector Authority

Package	Waste Collector Authority	Contact Information
Package 1	NA	NA
Package 2	NA	NA
Package 3	Kaliganj Municipality, Jhenaidah, Maheshpur Municipality, Jhenaidah Meherpur Municipality, Meherpur Alamdanga Municipality, Chuadanga Kushtia Municipality, Kushtia Manirampur Municipality, Jashore Satkhira Municipality, Satkhira Dumuria UP, Khulna	01774-709195 01719818123 01716-037638 01915330444 01718-552606 01917147626 01740625615 01964784750
Package 4	Niamatpur UP, Naogaon Nazipur Municipality, Patnitala, Naogaon Domar Municipality, Nilphamari Barokhata UP, Hatibandha, Lalmonirhat Pirojpur Municipality, Pirojpur	01632558978 01762334819 01724176353 01719867757 01918050542
Package 5	NA	NA
Package 6	NA	NA
Package 7	NA	NA
Package 8	NA	NA

3.3 Environmental Health and Safety

During reporting period (July- December 2023), there are total 500 toolbox training conducted in Package 3 and 400 training conducted in Package 4 mentioned in Table 3-5.

Table 3-5: TBT Imparted During Jul- Dec 2023 in DWZTGEP

Month	Number of TBT Conducted	Number of Participants	Remarks
Package 3			
July- December 2023	500	6000	Annexure-32
Package 4			
July- December 2023	400	4000	Annexure-32

Table 3-6: Types of Material/ Waste

Type of Materials/Waste	Approximate Volume (units)	Source or Destination	Remarks
Material examples: Transformer Oil Sand for Fill	-	-	No incident reported during reporting period

3.4 Health and Safety Status

Health and Safety considerations during reporting period are mentioned in Table 3-7;

Table 3-7: Health and Safety

Item	Current Status	Locations	Requirement or Mitigating Measures	Actions	Remarks
Site Security Measures	Proper fencing, lighting and surveillance cameras are available at all substations. Training is provided frequently to the security personnel, and Proper registers are well maintained.	Package 3 and 4	Proper fencing, lighting and surveillance cameras (if possible) should be available. Appointment and training of security personnel, maintenance of register during in and out (for both human, equipment and traffic).	No actions required during reporting period	
Workers Welfare	Safe and hygiene of the workplace are well maintained	Package 3 and 4	Ensure safe and hygiene workplace,	No actions required during reporting period	Drinking water and safe sanitation facilities, PPE, safe accommodation, Fire safety and first aid facilities are available in construction sites and substations (Annexure 23)
PPE Inventories	PPE inventories are available in construction sites and substations	Package 3 and 4	PPE Inventories should be available at every construction sites and substations	No actions required during reporting period	Annexure 30
Medical and First Aid Provision	First Aid facilities and MoU with local hospital are available for all construction sites and substations	Package 3 and 4	First Aid facilities and MoU with local hospital should be available for all construction sites and substations	No actions required during reporting period	

Item	Current Status	Locations	Requirement or Mitigating Measures	Actions	Remarks
Community Health and Safety	Segregated waste bins are present, Vehicular movements are managed with proper scheduling and limited speed.	Package 3 and 4	Waste and traffic management should be well maintained	No actions required during reporting period	
Emergency Preparedness and Response Procedures	Contact lists for emergency support are available in every construction sites and substation. Also, firefighting and first aid training are given to the worker regularly	Package 3 and 4	Emergency contact lists should be available at every site, and First aid and fire safety training should be provided to workers and other staffs.	No actions required during reporting period	
Safety Equipment Record Sheet	Available and maintaining in all substation and construction sites	Package 3 and 4	Should be maintained in all construction sites and substation	No actions required during reporting period	
Incidents	Illness	Package 3 and 4		Recovered with proper medication and one day rest	Two case of illness occurred (Viral flu and fever and fever) in Satkhira-Manirampur TL 21/10/2023 Satkhira- Rupsha TL 14/08/2023 (Annexure 31)

3.5 Meaningful Consultation and Grievance Redress

34. The PMU keeps records of all the grievances in a site-specific logbook (Annexure-16) and the first priority is to resolve the grievances locally through mutual consultation. If any grievance is not redressed at local level, the issue will be brought to the attention of the GRC and the GRC will consult with the relevant stakeholders to resolve the issue in the most amicable way possible ensuring all the concerns of the relevant parties have been addressed. So far, no such issue has been forwarded to the GRC and minor issues reported at site have been resolved at local level.

Table 3-8: Consultation meetings held during July to December 2023

Package	Consultation Date	Location	Issue discussed	No. of Participants
Package 3	08-11-2023	Kaliganj- Maheshpur 132 kV Transmission Line	Movement Disturbances, Dust pollution	8
	09-11-2023		Occupancy of additional land	5

Table 3-9: Affected Community

Complaint/s or Affected Persons	Location/s and Date/s of Complaint	Description of Grievance/ Complaint	Timeline	Time-bound Corrective Action
Local Community	Vill: Gourinathpur Date: 08.09.2023	Left construction materials along the roadside.	Resolved within the complaint issuing day	Construction materials to be removed within the same day
Landowner	Vill: Manirampur Date: 11-10-2023	Materials carrying transport are moving speedily in the local road and the noise of construction activities are very disturbing.	Resolved within the complaint issuing day	Instructed the driver for slow movement in the local road and also suggested contractor to use updated machines and equipment with noise cancellation technologies.

3.6 Training and Awareness Activities

35. PIU has conducted day-long training on EHS for contractors of package-3, 4, 7 and 8 as well as its own staff through the experts from EQMS Consulting Ltd (Annexure-17). The training was fruitful in creating awareness among the participants on the importance of EHS activities, determining shortfalls and ensuring proper corrective actions. Similar training program for the other contractors are initiated during reporting period. Attendance list and training picture are depicted in Annexure 17.

Table 3-10: Details of training programs imparted during Jul- Dec 2023

Training Title	Date and Venue	Category of Participants	No. of Participant		
			Male	Female	Total
MAP (Client observations and compliance)	05.07.2023	Staff	9	-	9
Gang Induction	28.07.2023	Workers	10	-	10
Gang Induction	6.08.2023	Workers	12	-	12
MAP (Client observations and compliance)	6.08.2023	Staff	5	-	5
Staff Induction	06.09.2023	Staff	7	-	7
MAP (Do and Don't)	09.11.2023	Staff	7	-	7
Gang Induction	22.11.2023	Workers	12	-	12
Gang Induction	16.12.2023	Workers	9	-	9
Fire Fighting Training	30.10.2023	Staff and Worker	10	-	10
Electrical Training	21.10.2023	Electrician and worker	11	-	11

3.7 Status of CAP

Status of the raised during last ADB mission are discussed in the following Table 3-11;

Table 3-11: Status of the CAP

Sl. No.	Recommended Corrective Action	Present Status	Remarks
1.	Pile-drivers must be firmly supported on heavy timber sills, concrete beds or other secure foundation. Pile-driving equipment, lines and pulley blocks in use must be inspected by a competent person before the beginning of each shift. Operation of pile-driving equipment: - Only competent persons must operate pile-drivers. They must be trained, tested and certified. - Pile-driving operations must be governed by suitable signals. - Workers employed in pile-driving operations must wear hearing protection – the level of noise is >85dBA, safety footwear, safety helmets or hard hats and other PPE as required. During pile-driving operations: - no worker should stand under the outrigger/spotter. - no worker should be positioned directly under the hammer or pile; essential workers should stand at the sides or the rear of the leads during installation of the pile; and - essential workers should not be within a distance of one and a half time the suspended load. As far as practicable, piles should be prepared at a distance at least equal to twice the length of the longest pile from the pile-driver. When piles are driven at an inclination to the vertical, if necessary to prevent danger, they should rest in a guide. When a pile-driver is not in use, the hammer must be blocked at the bottom of the leads. See further instructions in ILO CoP for Safety and Health in Construction 2021 section 18.3³	Complied	

³ https://www.ilo.org/sector/Resources/codes-of-practice-and-guidelines/WCMS_861584/lang--en/index.htm

Sl. No.	Recommended Corrective Action	Present Status	Remarks
2.	Ensure that all individuals accessing the worksite holds a valid identity card and that all workers employed directly or by a subcontractor have received a letter of appointment and holds an identity card with photograph before accessing the site.	Not Complied	All workers do not have identity cards. Some of the workers were found with identity card
3.	Ensure that all workers are provided a separate bed; a separate locker for keeping personal belongings; canteens; and rest and recreation facilities.	Complied	Annexure 23
4.	Introduce a schedule for half an hour break after every two hours of work during the paid ordinary working time and increase the number of resting facilities and the access to water to decrease the risk of heat stress, as well as fatigue caused accidents. Ensure adequate water at site to avoid the dehydration, 4 litres per person on site.	Partially complied	Schedule for half an hour rest was not maintained at all sites. As worker take rest as their own need basis.
5.	A vehicle must be available at all remote work sites to facilitate the transport of any injured worker to the nearest medical center. A notice must be affixed in every worksite including stores stating the name and phone number to the person in charge of the first aid box or cupboard provided in respect of that room.	Complied	A fixed local transport (Auto Bike and van) is contacted for emergency support
6.	Ensure that all rotating parts are provided with a safety guard to prevent hand injuries. Warning signs and an easy to use cut off button required. Modern machinery should be used to minimize need for maintenance work.	Complied	Annexure 23
7.	All workers need to be provided with safety boots and gloves, check at the start of shift all have the correct PPE.	Complied	Annexure 23
8.	Use solid barricade to prevent public access to the working area – this can be moved from site to site as the towers progress	Complied	Annexure 23
9.	Ensure that all landowners are aware the safety clearance to the TL must be always Maintained and no encroachment is permitted for safety reasons	Complied	Before construction contractor consulted with landowners about limited entry at site for safety purpose
10.	The piling mud discharge needs to be managed in a way that there is no overtopping to the surrounding fields.	Complied	Annexure 23
11.	Records of waste generated, and routes disposed of (including for community use) need to be kept.	Partially Complied	There was no record found for the wastes (Dried Piling mud and empty plastic bags) received and used by local people. Waste inventory added in Annexure 21

Sl. No.	Recommended Corrective Action	Present Status	Remarks
12.	All the diesel machinery needs to be placed on a drip tray that supports the entire equipment. It should have a self-contained diesel tank, but if not then the fuel source and pipes must also be kept within the drip tray and the diesel container to be a marked metal container. Spill kits must be available on the site.	Partially Complied	There was no secondary container found for preventing oil spillage from pipes.
13.	As well as providing hearing protection to workers when exposed to >85dBA over 8 hours when piling works are close to residential properties noise mitigation will need to be adopted.	Partially Complied	Contractors are trying to use modern equipment with noise cancelation facilities
14.	The toilet provided for the workers at the worksite needs to be with adequate superstructure, plus hand washing facilities. It must be a portable self-contained toilet where the wastewater is contained and can be taken off site for treatment to prevent pollution.	Complied	Annexure 23
15.	Ensure the community is aware of the GRM and who to complain to, post notice with contact number at the site	Complied	Annexure 23
16.	Ensure the site-level GRM record includes details of the resolution reached.	Complied	Annexure 16

3.8 Performance Level on Environmental Supervision and Monitoring Result During July- December 2023

Performance Level of Environmental Supervision and Monitoring Result are evaluated through the consideration of the compliance maintained during study period. Comparison of Performance level on Environmental Supervision and Monitoring Result with previous EMR result are mentioned in Table 3-12.

Table 3-12: Comparison of Performance level on Environmental Supervision and Monitoring Result with previous EMR result.

Indicators	2 nd EMR (Jul- Dec) 2022	1 st EMR (Jan-Jun) 2023	2 nd EMR (Jul- Dec) 2023
Labor Management	Satisfactory	Moderately Satisfactory	Satisfactory
Waste Management	NA	Satisfactory	Moderately Satisfactory
EHS	NA	Moderately Satisfactory	Satisfactory
Health and Safety	NA	NA	Satisfactory
Meaningful Consultation and Grievance Redress	Satisfactory	Satisfactory	Satisfactory
Training and Awareness Activities	Satisfactory	Satisfactory	Satisfactory
Status of CAP	Satisfactory	Satisfactory	Moderately Satisfactory

4 CONCLUSION

36. Although construction work at some transmission line sites started before disclosure of the relevant IEE addendums in order to take advantage of the construction in dry season, PIU ensured that necessary baseline data is collected prior to commencement of the construction activities. In all future cases, this issue will be taken care of with utmost sincerity to ensure IEE addendums are submitted to ADB prior to construction work begins. In general, the PMU of PGCB is very responsive to environmental and social safeguards throughout the project implementation period. It ensures adherence to EMP and other applicable requirements and is active in enforcing proper corrective measures whenever any gap is identified.

ANNEXURE

Annexure-1: Renewal of Environmental Clearance Certificate

Government of the People's Republic of Bangladesh
Department of Environment
Head Office, Paribesh Bhaban
E-16 Agargaon, Dhaka-1207
www.doe.gov.bd

Memo No: 22.02.0000.018.72.055.20.95

Date: 30/07/2023

Subject: Renewal of Environmental Clearance for Dhaka and Western Zone Transmission Grid Expansion Project of Power Grid Company of Bangladesh Ltd.

Ref: Your application dated 10.07.2023

With reference to your above application, the Department of Environment hereby renews the Environmental Clearance in favor of Renewal of Environmental Clearance for Dhaka and Western Zone Transmission Grid Expansion Project of Power Grid Company of Bangladesh Ltd. The terms and conditions stated in the Environmental Clearance of the above project issued on 28.07.2020 vide memo no. 22.02.0000.018.72.055.20.160 shall remain valid for the renewed period.

2. This renewal is valid up to 27 July, 2024. For further renewal an application along with a) the renewal fees (as per the ECR, 2023) b) VAT on renewal fees (in separate Treasury Chalan) and c) all associated documents shall be submitted to the Head Office of DoE at least 30 days ahead of expiry date.


(Masud Iqbal Md. Shameem)
Director (Environmental Clearance)
Phone # 222218342

Project Director (Chief Engineer)
Dhaka and Western Zone Transmission Grid Expansion Project
Power Grid Company of Bangladesh Ltd. (PGCB)
PGCB Bhaban, Avenue-03, Jahurul Islam City
Aftabnagar, Badda, Dhaka.

Copy Forwarded to :

1. Director, Department of Environment, Dhaka Regional/Rajshahi/Khulna/Barishal/Rangpur Divisional Office, Dhaka/Bogura/Khulna/Barishal/Rangpur.
2. Assistant Director, Office of the Director General, Department of Environment, Head Office, Dhaka.

Annexure-2: SCC-47

47. Environmental Management Plan

The Contractor shall comply with all applicable national, provincial and local environmental laws and regulations.

The Contractor shall (a) establish an operational system for managing environmental impacts, (b) carry out all of the monitoring and mitigation measures set forth in the [Initial Environmental Examination ("IEE")] or [Environmental Management Plan ("EMP")] and (c) allocate the budget required to ensure that such measures are carried out. The Contractor shall submit semi-annual reports on the carrying out of such measures to the Employer.

More particularly, the Contractor shall comply with (i) the measures and requirements set forth in the initial environmental examination and the environmental management plan attached hereto as Appendix [2,3]; and (ii) any corrective or preventative actions set out in safeguards monitoring reports that the Employer will prepare from time to time to monitor implementation of the initial environmental examination and the environmental management plan.

The Contractor shall allocate a budget for compliance with these measures, requirements and actions."

Appendix to SCC (will be provided in PDF form) with the bidding document):

1. Resettlement Plan (RP)
2. Initial Environment Examination (IEE)
3. Environment management Plan (EMP)

Annexure-3: SCC-9.8 (c)

9. Contractor's Responsibilities

A new Sub-Clause 9.8.c) is added:

9.8.c) The Contractor shall elaborate and submit for approval within 30 (thirty) days from the Effective Date of the contract, his own and works-specific (Construction) Environmental and Social Management Plan ((C)ESMP) in line with the ESMP attached in this section. The Employer shall comment or approve the document within 14 days from the receipt. The final (C) ESMP should be concluded in joint workshops between the authorized representatives of the Employer and the Contractor.

Annexure-4: Link to Approved CESMPs

<https://drive.google.com/drive/folders/1DIJYg-ItKw7izRHxLEvEKG2SOLni2HB?usp=sharing>

Annexure-5: SCC 22.2.7

22.2.7 Health and Safety

- (d) The Contractor shall throughout the contract (including the Defect Liability Period):
- (i) conduct Information, Education and Consultation Communication (IEC) campaign at least every other month, addressed to all the Site staff and labour (including the Contractor's employees, all Sub-Contractors and Employer's and Project Manager's employees, and all truck drivers and crew making deliveries to Site for construction activities) and to the immediate local communities particularly women concerning the risks, dangers and impact, and appropriate avoidance behavior with respect to of Sexually Transmitted Diseases (STD) - or Sexually Transmitted Infections (STI) in general and HIV/AIDS in particular;
 - (ii) provide male or female condoms for all Site staff and labour as appropriate; and
 - (iii) provide for STI and HIV/AIDS screening, diagnosis, counselling and referral to dedicated national STI and HIV/AIDS program, (unless otherwise agreed) of all Site staff and labour.
 - (iv) conduct health and safety programs for workers employed under the project, and shall include information on the trafficking of women and the risk of sexually transmitted diseases, including HIV/AIDS in such programs

Annexure-6: GCC 22.2

22.2 Labor

22.2.1 Engagement of Staff and Labor

- (a) Except as otherwise stated in the Specification, the Contractor shall make arrangements for the engagement of all staff and labor, local or otherwise, and for their payment, housing, feeding, and transport.
- (b) The Contractor shall provide and employ on the Site in the installation of the Facilities such skilled, semi-skilled, and unskilled labor as is necessary for the proper and timely execution of the Contract. The Contractor is encouraged to use local labor that has the necessary skills.
- (c) The Contractor shall be responsible for obtaining all necessary permit(s) and/or visa(s) from the appropriate authorities for the entry of all labor and personnel to be employed on the Site into the country where the Site is located. The Employer will, if requested by the Contractor, use his best endeavors in a timely and expeditious manner to assist the Contractor in obtaining any local, state, national, or government permission required for bringing in the Contractor's personnel.
- (d) The Contractor shall at its own expense provide the means of repatriation to all of its and its Subcontractor's personnel employed on the Contract at the Site to the place where they were recruited or to their domicile. It shall also provide suitable temporary maintenance of all such persons from the cessation of their employment on the Contract to the date programmed for their departure. In the event that the Contractor defaults in providing such means of transportation and temporary maintenance, the Employer may provide the same to such personnel and

recover the cost of doing so from the Contractor.

22.2.2 Persons in the Service of Employer

The Contractor shall not recruit, or attempt to recruit, staff and labor from amongst the Employer's Personnel.

22.2.3 Labor Laws

- (a) The Contractor shall comply with all the relevant labor Laws applicable to the Contractor's Personnel, including Laws relating to their employment, health, safety, welfare, immigration, and emigration, and shall allow them all their legal rights.
- (b) The Contractor shall at all times during the progress of the Contract use its best endeavors to prevent any unlawful, riotous, or disorderly conduct or behavior by or amongst its employees and the labor of its Subcontractors.
- (c) The Contractor shall, in all dealings with its labor and the labor of its Subcontractors currently employed on or connected with the Contract, pay due regard to all recognized festivals, official holidays, religious, or other customs and all local laws and regulations pertaining to the employment of labor.

22.2.4 Rates of Wages and Conditions of Labor

- (a) The Contractor shall pay rates of wages, and observe conditions of labor, which are not lower than those established for the trade or industry where the work is carried out. If no established rates or conditions are applicable, the Contractor shall pay rates of wages and observe conditions which are not lower than the general level of wages and conditions observed locally by employers whose trade or industry is similar to that of the Contractor.
- (b) The Contractor shall inform the Contractor's Personnel about their liability to pay personal income taxes in the Country in respect of such of their salaries, wages, and allowances as are chargeable under the Laws for the time being in force, and the Contractor shall perform such duties in regard to such deductions thereof as may be imposed on him by such Laws.

22.2.5 Working Hours

- (a) No work shall be carried out on the Site on locally recognized days of rest, or outside the normal working hours stated in the SCC, unless
 - (i) otherwise stated in the Contract;
 - (ii) the Project Manager gives consent; or
 - (iii) the work is unavoidable, or necessary for the protection of life or property or for the safety of the Works, in which case the Contractor shall

SCC.

22.2.9 Records of Contractor's Personnel

The Contractor shall keep accurate records of the Contractor's personnel, including the number of each class of Contractor's Personnel on the Site and the names, ages, gender, hours worked, and wages paid to all workers. These records shall be summarized on a monthly basis in a form approved by the Project Manager and shall be available for inspection by the Project Manager until the Contractor has completed all work.

22.2.10 Supply of Foodstuff

The Contractor shall arrange for the provision of a sufficient supply of suitable food as may be stated in the Specification at reasonable prices for the Contractor's Personnel for the purposes of or in connection with the Contract.

22.2.11 Supply of Water

The Contractor shall, having regard to local conditions, provide on the Site an adequate supply of drinking and other water for the use of the Contractor's Personnel.

22.2.12 Measures against Insect and Pest Nuisance

The Contractor shall at all times take the necessary precautions to protect the Contractor's Personnel employed on the Site from insect and pest nuisance, and to reduce their danger to health. The Contractor shall comply with all the regulations of the local health authorities, including use of appropriate insecticide.

22.2.13 Alcoholic Liquor or Drugs

The Contractor shall not, otherwise than in accordance with the Laws of the Country, import, sell, give barter, or otherwise dispose of any alcoholic liquor or drugs, or permit or allow importation, sale, gift barter, or disposal by Contractor's Personnel.

22.2.14 Arms and Ammunition

The Contractor shall not give, barter, or otherwise dispose of, to any person, any arms or ammunition of any kind, or allow Contractor's Personnel to do so.

22.2.15 Prohibition of All Forms of Forced or Compulsory Labor

The contractor shall not employ "forced or compulsory labor" in any form. "Forced or compulsory labor" consists of all work or service, not voluntarily performed, that is extracted from an individual under threat of force or penalty.

22.2.16 Prohibition of Harmful Child Labor

The Contractor shall not employ any child to perform any work that is economically exploitative, or is likely to be hazardous to, or to interfere with, the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral, or social development.

immediately advise the Project Manager.

- (b) If and when the Contractor considers it necessary to carry out work at night or on public holidays so as to meet the Time for Completion and requests the Project Manager's consent thereto, the Project Manager shall not unreasonably withhold such consent.
- (c) This Subclause shall not apply to any work which is customarily carried out by rotary or double shifts.

22.2.6 Facilities for Staff and Labor

- (a) Except as otherwise stated in the Specification, the Contractor shall provide and maintain all necessary accommodation and welfare facilities for the Contractor's Personnel. The Contractor shall also provide facilities for the Employer's Personnel as stated in the Specification.
- (b) The Contractor shall not permit any of the Contractor's Personnel to maintain any temporary or permanent living quarters within the structures forming part of the Permanent Works.

22.2.7 Health and Safety

- (a) The Contractor shall at all times take all reasonable precautions to maintain the health and safety of the Contractor's Personnel. In collaboration with local health authorities, the Contractor shall ensure that medical staff, first aid facilities, sick bay, and ambulance service are available at all times at the Site and at any accommodation for Contractor's and Employer's Personnel, and that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics.
- (b) The Contractor shall appoint an accident prevention officer at the Site, responsible for maintaining safety and protection against accidents. This person shall be qualified for this responsibility, and shall have the authority to issue instructions and take protective measures to prevent accidents. Throughout the performance of the Contract, the Contractor shall provide whatever is required by this person to exercise this responsibility and authority.
- (c) The Contractor shall send to the Project Manager, details of any accident as soon as practicable after its occurrence. The Contractor shall maintain records and make reports concerning health, safety, and welfare of persons, and damage to property, as the Project Manager may reasonably require.

22.2.8 Funeral Arrangements

In the event of the death of any of the Contractor's personnel or accompanying members of their families, the Contractor shall be responsible for making the appropriate arrangements for their return or burial, unless otherwise specified in the

Annexure-7: GRC




পাওয়ার গ্রিড কোম্পানি অফ বাংলাদেশ লিঃ
POWER GRID COMPANY OF BANGLADESH LTD.
 (An Enterprise of Bangladesh Power Development Board)



Ref. No.: 27.21.0000.453.06.001.21.122 Date: 04/03/2021

Office Order

As per approval of PGCB management a Grievance Redress Committee for "Dhaka & Western Zone Transmission Grid Expansion Project" has been formed by following members:

Sl. No.	Name & Designation	Name of the Office	Status in Committee
1.	Deputy Project Director of concerned package	DWZTGEP, PGCB	Convener
2.	Executive Engineer of concerned package	DWZTGEP, PGCB	Member
3.	Manager Accounts & Admin	DWZTGEP, PGCB	Member
4.	Sub-Divisional Engineer / Assistant Engineer / Sub Asst. Engineer of concerned package	DWZTGEP, PGCB	Member
5.	Project Manager or representative of concerned Turnkey Contractor	Concern Turnkey Contractor	Member
6.	Representative of RAP implementation consultant.	RAP implementation consultant	Member
7.	Local Union Parishad Member	Union Parishad	Member

Committee will manage construction related complaints & payment for compensation and make report time to time to undersigned.


(Md. Sharfuddin Hossain)
 Project Director (CE)
 Dhaka & Western Zone Transmission
 Grid Expansion Project
 Mobile No: 01713850419

Copy to:

- Managing Director, PGCB
- Executive Director (P&D/O&M/Finance), PGCB
- Chief Engineer, (P&D), PGCB
- Mr. Convener/ Member of the Committee.
- BRM, ADB, Dhaka.
- Office Copy.

Annexure-8: Compensation Paid by the Contractor to the Local Community

Compensation Paid by the Contractor to the Local Community is described in SMR, July-December 2023.

Annexure-9: Waste Collection and Separation



Annexure-10: Covering and Spray of Water

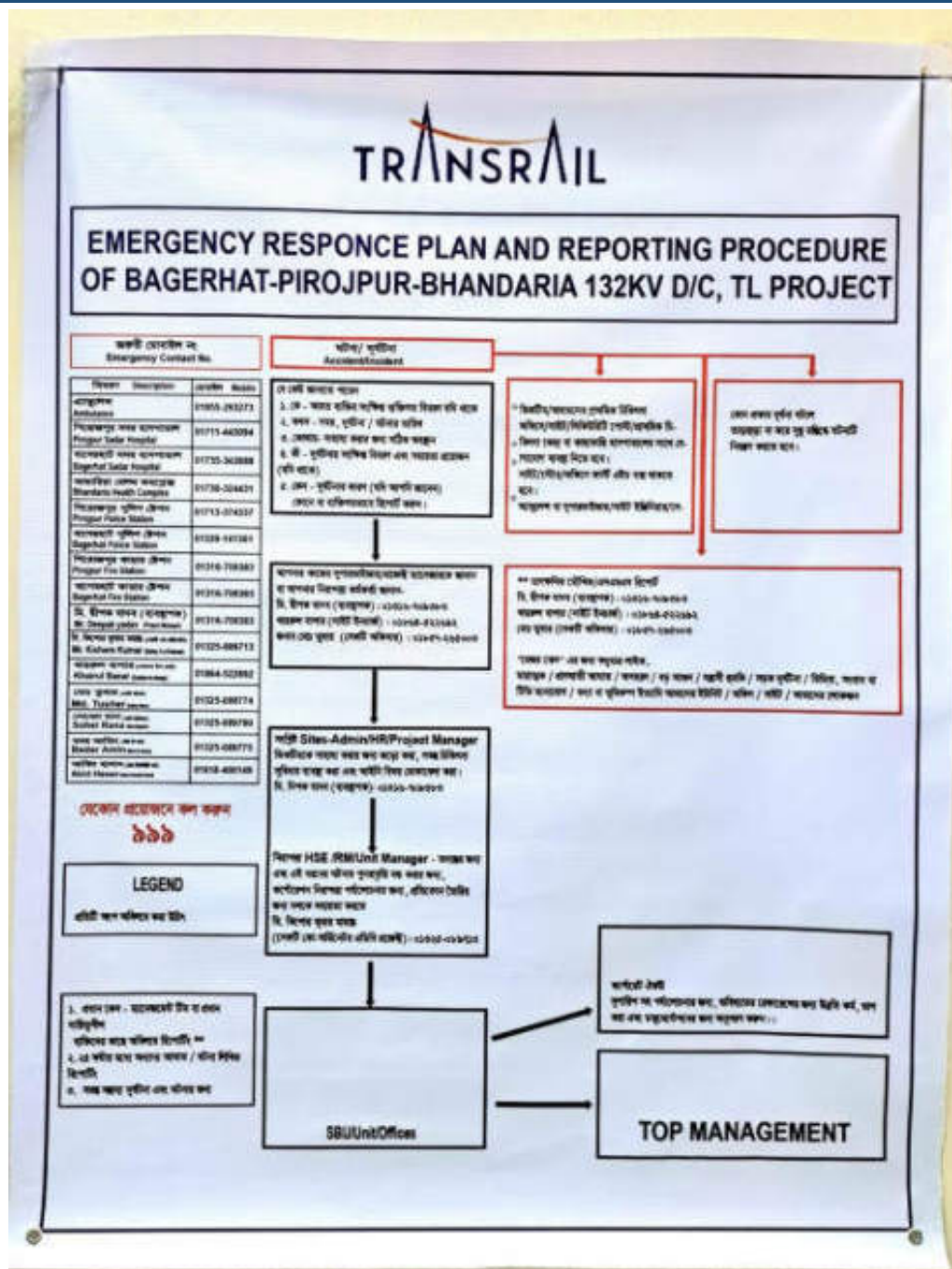


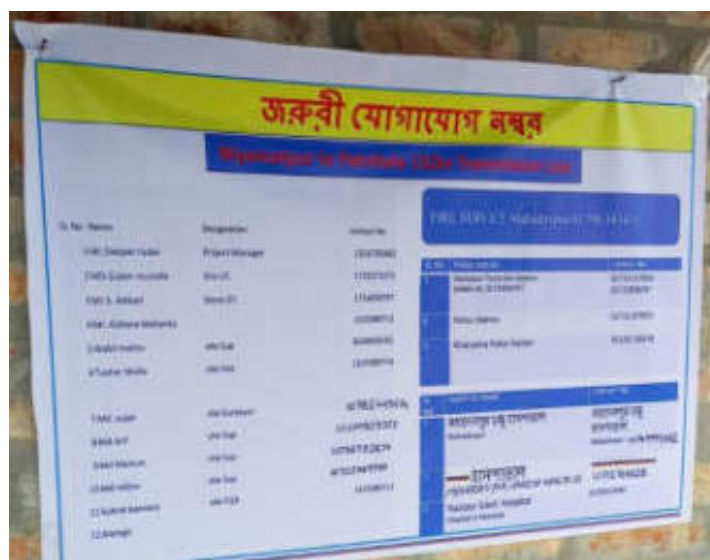
Annexure-11: Traffic Control



Annexure-12: Ensuring Personal Safety and Emergency Contact Information







Annexure-13: PIU Set-Up



Annexure-14: Link to Baseline Data

https://drive.google.com/drive/folders/116Pv1_8bc5_ZwPFahPxxvtiOzxm9vo73?usp=sharing

Annexure-15: Link to IEE Addendum

<https://drive.google.com/drive/folders/1ZTrPGCGgXb6JOVO9s01w81tFeKq7Xrlj?usp=sharing>

Annexure-16: Complain Logbook and Leaflets

ক্রমিক সংখ্যা	তারিখ	স্বাক্ষর	বিবরণ	কমিটি/স্বাক্ষর	স্থান	ফলাফল	সংস্থা
১	২০/০১/১৮	মহম্মদ	গোয়ালপুর	কমিটি সভা- আবদুল হক আবদুল হক আবদুল হক	মহম্মদ	আবদুল হক আবদুল হক আবদুল হক	গোয়ালপুর

ক্রমিক সংখ্যা	তারিখ	স্বাক্ষর	বিবরণ	কমিটি/স্বাক্ষর	স্থান	ফলাফল	সংস্থা
২	২০/০১/১৮	মহম্মদ	গোয়ালপুর	কমিটি সভা- আবদুল হক আবদুল হক আবদুল হক	মহম্মদ	আবদুল হক আবদুল হক আবদুল হক	গোয়ালপুর

অভিযোগ প্রতিকার ব্যবস্থা

কোনো যুক্তি সংগত কিংবা বাস্তব সম্মত
হোক বা না হোক তার প্রতিকার চাওয়ার
একটি কার্যকর প্ল্যাটফর্ম



পাওয়ার গ্রিড কোম্পানী অব বাংলাদেশ লিমিটেড

**অভিযোগ প্রতিকার ব্যবস্থা
সংক্রান্ত তথ্য**



(www.pgcb.gov.bd) এ প্রকাশিত
অভিযোগ প্রতিকার কমিটি সংক্রান্ত তথ্য
পাওয়া যাবে



ইমেইল (info@pgcb.org.bd,
ফোন: +৮৮০২৫৫০৪৬৭৩১-৩৫, ফ্যাক্স
+৮৮০২৫৫০৪৬৭২২) এর মাধ্যমে অভিযোগ
দাখিল করা যাবে



প্রজেক্ট সাইট/অফিসে নিখরাত ফর্ম এর
মাধ্যমে অভিযোগ গ্রহণ ও প্রাপ্তি স্বীকার
প্রদানের ব্যবস্থা রয়েছে



পাওয়ার গ্রিড কোম্পানী অব বাংলাদেশ লিমিটেড

Annexure-17: EHS and Other Training and Attendance List of the Training

	
Electrical Mock Drill	Fire Fighting Training
	
Fire Inspection	Electrical Training
	



TRANSRAIL LIGHTING LIMITED
FIELD QUALITY ASSURANCE
 Participation Report

Title: Gang Induction (Shahajalab Bancha) Date: 16/09/2023
 Conducted by (FGA): Subrata Chandra Project Code: G-479 (A)

Sr. No.	Name of Participant	Signature	Remark (if Any)
১।	শ্রী. শ্রী. শ্রী.		
২।	শ্রী. শ্রী.		
৩।	শ্রী. শ্রী.		
৪।	শ্রী. শ্রী.		
৫।	শ্রী. শ্রী.		
৬।	শ্রী. শ্রী.		
৭।	শ্রী. শ্রী.		
৮।	শ্রী. শ্রী.		
৯।	শ্রী. শ্রী.		
১০।	শ্রী. শ্রী.		
১১।	শ্রী. শ্রী.		
১২।	শ্রী. শ্রী.		
১৩।	শ্রী. শ্রী.		
১৪।	শ্রী. শ্রী.		
১৫।	শ্রী. শ্রী.		
১৬।	শ্রী. শ্রী.		
১৭।	শ্রী. শ্রী.		
১৮।	শ্রী. শ্রী.		
১৯।	শ্রী. শ্রী.		
২০।	শ্রী. শ্রী.		
২১।	শ্রী. শ্রী.		
২২।	শ্রী. শ্রী.		

FGA in-charge

Section in-charge

TRANSRAIL LIGHTING LIMITED
FIELD QUALITY ASSURANCE

Participation Report

Title: Gang Shuktion (Green Engineering) Date: 28/07/2023
Conducted by (FQA): Subrata Khanra Project Code: 01-479 (E)

Sr. No	Name of Participant	Signature	Remark (if Any)
১.	০০১ ১৩২	০০১ ১৩২	
২.	০০১ ১৩৩	১৩৩	
৩.	০০১ ১৩৪	১৩৪	
৪.	০০১ ১৩৫	১৩৫	
৫.	০০১ ১৩৬	১৩৬	
৬.	০০১ ১৩৭	১৩৭	
৭.	০০১ ১৩৮	১৩৮	
৮.	০০১ ১৩৯	১৩৯	
৯.	০০১ ১৪০	১৪০	
১০.	০০১ ১৪১	১৪১	
১১.	০০১ ১৪২	১৪২	
১২.	০০১ ১৪৩	১৪৩	
১৩.	০০১ ১৪৪	১৪৪	
১৪.	০০১ ১৪৫	১৪৫	
১৫.	০০১ ১৪৬	১৪৬	
১৬.	০০১ ১৪৭	১৪৭	
১৭.	০০১ ১৪৮	১৪৮	
১৮.	০০১ ১৪৯	১৪৯	
১৯.	০০১ ১৫০	১৫০	
২০.	০০১ ১৫১	১৫১	
২১.	০০১ ১৫২	১৫২	
২২.	০০১ ১৫৩	১৫৩	
২৩.	০০১ ১৫৪	১৫৪	
২৪.	০০১ ১৫৫	১৫৫	
২৫.	০০১ ১৫৬	১৫৬	
২৬.	০০১ ১৫৭	১৫৭	
২৭.	০০১ ১৫৮	১৫৮	
২৮.	০০১ ১৫৯	১৫৯	
২৯.	০০১ ১৬০	১৬০	
৩০.	০০১ ১৬১	১৬১	

FQA in-charge

Subrata Khanra
Transrail Lighting Ltd.
G-479, DAVCO, Firozpur

Section in-charge



Annexure-18: Community Engagement





Training Details

https://drive.google.com/file/d/1nY0OJZDjPKQqghlKA_Nsw1y7frwcqDOE/view?usp=sharing

Annexure-19: Photos of Switchyards of Existing Substations

<https://drive.google.com/drive/folders/1gd64IiY603Y3jj0QRSsXLAtnYtoxyNyP?usp=sharing>

Annexure-20: EMP Clause of Packages-7 and 8

47. Environmental Management Plan

The Contractor shall comply with all applicable national, provincial and local environmental laws and regulations.

The Contractor shall (a) establish an operational system for managing environmental impacts, (b) carry out all of the monitoring and mitigation measures set forth in the [Initial Environmental Examination ("IEE")] or [Environmental Management Plan ("EMP")] and (c) allocate the budget required to ensure that such measures are carried out. The Contractor shall submit semi-annual reports on the carrying out of such measures to the Employer.

More particularly, the Contractor shall comply with (i) the measures and requirements set forth in the initial environmental examination and the environmental management plan attached

Design, Supply, Installation, Testing and Commissioning of 230/33 kV GIS Substation at Shela and 132/33 kV GIS Substations at Dimer, Hattibanda, Shishar, Sharga, Jharkata, Pagar on Turkey Sars (Package-8).



Section 8: Special Conditions of Contract

Page 8-13

hereto as Appendix [2.3]; and (ii) any corrective or preventative actions set out in safeguards monitoring reports that the Employer will prepare from time to time to monitor implementation of the initial environmental examination and the environmental management plan. The Contractor shall allocate a budget for compliance with these measures, requirements and actions."

Appendix to SCC will be provided (in PDF form) with the bidding document:

1. Resettlement Plan (RP)
2. Initial Environment Examination (IEE)
3. Environment Management Plan (EMP)
4. Corrective Action Plan (CAP)

47. Environmental Management Plan

The Contractor shall comply with all applicable national, provincial and local environmental laws and regulations.

The Contractor shall (a) establish an operational system for managing environmental impacts, (b) carry out all of the monitoring and mitigation measures set forth in the [Initial Environmental Examination ("IEE")] or [Environmental Management Plan ("EMP")] and (c) allocate the budget required to ensure that such measures are carried out. The Contractor shall submit semi-annual reports on the carrying out of such measures to the Employer.

More particularly, the Contractor shall comply with (i) the measures and requirements set forth in the initial environmental examination and the environmental management plan attached hereto as Appendix (2.3); and (ii) any corrective or preventative actions set out in safeguards monitoring reports that the Employer will prepare from time to time to monitor implementation of the initial environmental examination and the environmental management plan.

The Contractor shall allocate a budget for compliance with these measures, requirements and actions.*

Appendix to SCC will be provided (in PDF form) with the bidding document:

1. Resettlement Plan (RP)
2. Initial Environment Examination (IEE)
3. Environment Management Plan (EMP)
4. Corrective Action Plan (CAP)



Annexure-21: Waste Inventory and Site Clearance from All Solid Waste

L&T CONSTRUCTION POWER TRANSMISSION & DISTRIBUTION IC MONTHLY WASTE GENERATION REPORT							
Project Name: - 230KV & 132 KV ADB-3 Project				Document No: - WMS/007			
Month: - July -23				Date: - 11/07/23			
Sl. No	Waste Generation Type	Unit	Generation for the month	Reused	Recycled	Disposed	Remarks (disposed by TP/Own)
1	Non-Hazardous Waste						
A	General Waste						
i.	Hand Gloves	Pair	40	33		7	Own
ii.	PP rope	Kg	20	20			
iii.	Safety Helmet	Nos	40	40			
iv.	Safety Shoes	Pair	40	0		40	
v.	Cartoon Box	Kg	10			10	TP
vi.	Safety Harness	Nos	8				
B	Materials Waste						
I.	Conductor Bits	Kg	0				
II.	Steel	Ton	21	16		5	TP
III.	Other Metals	Kg	0				
C	Wood Waste	Kg	50	0		50	Own
D	Food Waste	Kg	0				
E	Paper Waste	Kg	5	5			
F	Packing Materials	Kg	0				
G	Other Non-Hazardous materials	Kg	0				
2.	Hazardous Waste						
A	Paints	Ltr	0				
B	Lubricants oil	Ltr	0				
C	Plastic waste	Kg	0				
D	Cement bags	Nos	4500	4500			
E	Printing cartridges	Nos	0				
F	E-Waste (Desktop, CPU, Printer & Mouse, etc.)	Nos	1	1			
G	Medical Waste	Kg	0				
3.	Sewage Waste & Wastewater						
A	Treated sewage wastewater	Ltr					
B	Sewage Sludge	Ltr					
C	Wastewater	Ltr					


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L&T CONSTRUCTION POWER TRANSMISSION & DISTRIBUTION IC MONTHLY WASTE GENERATION REPORT							
Project Name: - 230KV & 132 KV ADB-3 Project				Document No: - WMS/008			
Month: - August -23				Date: - 11/08/23			
Sl. No	Waste Generation Type	Unit	Generation for the month	Reused	Recycled	Disposed	Remarks (disposed by TP/Own)
1	Non-Hazardous Waste						
A	General Waste						
	vii. Hand Gloves	Pair	33	33			
	viii. PP rope	Kg	20				
	ix. Safety Helmet	Nos	40				
	x. Safety Shoes	Pair	40				
	xi. Cartoon Box	Kg	8			8	TP
	xii. Safety Harness	Nos	8				
B	Materials Waste						
	IV. Conductor Bits	Kg	0				
	V. Steel	Ton	21	16		5	TP
	VI. Other Metals	Kg	0				
C	Wood Waste	Kg	50	0		50	Own
D	Food Waste	Kg	0				
E	Paper Waste	Kg	5	5			
F	Packing Materials	Kg	0				
G	Other Non-Hazardous materials	Kg	0				
2. Hazardous Waste							
A	Paints	Ltr	0				
B	Lubricants oil	Ltr	0				
C	Plastic waste	Kg	0				
D	Cement bags	Nos	4500	4500			
E	Printing cartridges	Nos	0				
F	E-Waste (Desktop, CPU, Printer & Mouse, etc.)	Nos	1	1			
G	Medical Waste	Kg	0				
3. Sewage Waste & Wastewater							
A	Treated sewage wastewater	Ltr					
B	Sewage Sludge	Ltr					
C	Wastewater	Ltr					



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L&T CONSTRUCTION POWER TRANSMISSION & DISTRIBUTION IC MONTHLY WASTE GENERATION REPORT							
Project Name: - 230KV & 132 KV ADB-3 Project				Document No: - WMS/009			
Month: - Sep -23				Date: - 08/09/23			
Sl. No	Waste Generation Type	Unit	Generation for the month	Reused	Recycled	Disposed	Remarks (disposed by TP/Own)
1	Non-Hazardous Waste						
A	General Waste						
	xiii. Hand Gloves	Pair	33	33			own
	xiv. PP rope	Kg	20				
	xv. Safety Helmet	Nos	40				
	xvi. Safety Shoes	Pair	40				
	xvii. Carton Box	Kg	8			8	TP
	xviii. Safety Harness	Nos	8				
B	Materials Waste						
	VII. Conductor Bits	Kg	0				
	VIII. Steel	Ton	25	20		5	TP
	IX. Other Metals.....	Kg	0				
C	Wood Waste	Kg	50	0		50	Own
D	Food Waste	Kg	0				
E	Paper Waste	Kg	20	10		10	Own
F	Packing Materials	Kg	0				
G	Other Non-Hazardous materials	Kg	0				
2.	Hazardous Waste						
A	Paints	Ltr	0				
B	Lubricants oil	Ltr	0				
C	Plastic waste	Kg	0				
D	Cement bags	Nos	2000	2000			
E	Printing cartridges	Nos	0				
F	E-Waste (Desktop,CPU,Printer&Mouse,etc.)	Nos	0	0			
G	Medical Waste	Kg	0				
3.	Sewage Waste & Wastewater						
A	Treated sewage wastewater	Ltr					
B	Sewage Sludge	Ltr					
C	Wastewater	Ltr					



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**L&T CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION IC
MONTHLY WASTE GENERATION REPORT**

Project Name: - 230KV & 132 KV ADB-3 Project				Document No: - WMS/010			
Month: - Oct-23				Date: - 11/10/23			
Sl. No	Waste Generation Type	Unit	Generation for the month	Reused	Recycled	Disposed	Remarks (disposed by TP/Own)
1. Non-Hazardous Waste							
A. General Waste							
xix.	Hand Gloves	Pair	77	20		57	own
xx.	PP rope	Kg	25				
xxi.	Safety Helmet	Nos	50				
xxii.	Safety Shoes	Pair	50				
xxiii.	Cartoon Box	Kg	10			8	TP
xxiv.	Safety Harness	Nos	40				
B. Materials Waste							
X.	Conductor Bits	Kg	0				
XI.	Steel	Ton	21	16		5	TP
XII.	Other Metals.....	Kg	0				
C.	Wood Waste	Kg	50	0		50	own
D.	Food Waste	Kg	0				
E.	Paper Waste	Kg	5	5			
F.	Packing Materials	Kg	0				
G.	Other Non-Hazardous materials	Kg	0				
2. Hazardous Waste							
A.	Paints	Ltr	0				
B.	Lubricants oil	Ltr	0				
C.	Plastic waste	Kg	0				
D.	Cement bags	Nos	4500	4500			
E.	Printing cartridges	Nos	0				
F.	E-Waste (Desktop,CPU,Printer&Mouse.etc.)	Nos	1	1			
G.	Medical Waste	Kg	0				
3. Sewage Waste & Wastewater							
A.	Treated sewage wastewater	Ltr					
B.	Sewage Sludge	Ltr					
C.	Wastewater	Ltr					



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L&T CONSTRUCTION POWER TRANSMISSION & DISTRIBUTION IC MONTHLY WASTE GENERATION REPORT							
Project Name: - 230KV & 132 KV ADB-3 Project				Document No: - WMS/011			
Month: - Nov-23				Date: - 11/11/23			
Sl. No	Waste Generation Type	Unit	Generation for the month	Reused	Recycled	Disposed	Remarks (disposed by TP/Own)
1. Non-Hazardous Waste							
A. General Waste							
xxv.	Hand Gloves	Pair	33	33		24	own
xxvi.	PP rope	Kg	20				
xxvii.	Safety Helmet	Nos	40				
xxviii.	Safety Shoes	Pair	40				
xxix.	Cartoon Box	Kg	8			8	TP
xxx.	Safety Harness	Nos	8				
B. Materials Waste							
XIII.	Conductor Bits	Kg	0				
XIV.	Steel	Ton	21	16		5	TP
XV.	Other Metals.....	Kg	0				
C.	Wood Waste	Kg	50	0		50	Own
D.	Food Waste	Kg	0				
E.	Paper Waste	Kg	5	5			
F.	Packing Materials	Kg	0				
G.	Other Non-Hazardous materials	Kg	0				
2. Hazardous Waste							
A.	Paints	Ltr	0				
B.	Lubricants oil	Ltr	0				
C.	Plastic waste	Kg	0				
D.	Cement bags	Nos	4500	4500			
E.	Printing cartridges	Nos	0				
F.	E-Waste (Desktop,CPU,Printer&Mouse,etc.)	Nos	1	1			
G.	Medical Waste	Kg	0				
3. Sewage Waste & Wastewater							
A.	Treated sewage wastewater	Ltr					
B.	Sewage Sludge	Ltr					
C.	Wastewater	Ltr					



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**L&T CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION IC
MONTHLY WASTE GENERATION REPORT**

Project Name: - 230KV & 132 KV ADB-3 Project				Document No: - WMS/012			
Month: - Dec -23				Date: - 10/12/23			
Sl. No	Waste Generation Type	Unit	Generation for the month	Reused	Recycled	Disposed	Remarks (disposed by TP/Own)
1. Non-Hazardous Waste							
A. General Waste							
xxxI.	Hand Gloves	Pair	100	50		50	own
xxxII.	PP rope	Kg	20				
xxxIII.	Safety Helmet	Nos	50	40		10	
xxxIV.	Safety Shoes	Pair	40				
xxxV.	Cartoon Box	Kg	8			8	TP
xxxVI.	Safety Harness	Nos	8				
B. Materials Waste							
XVI.	Conductor Bits	Kg	0				
XVII.	Steel	Ton	21	16		5	TP
XVIII.	Other Metals.....	Kg	0				
C.	Wood Waste	Kg	50	0		50	Own
D.	Food Waste	Kg	0				
E.	Paper Waste	Kg	5	5			
F.	Packing Materials	Kg	0				
G.	Other Non-Hazardous materials	Kg	0				
2. Hazardous Waste							
A.	Paints	Ltr	0				
B.	Lubricants oil	Ltr	0				
C.	Plastic waste	Kg	0				
D.	Cement bags	Nos	4500	4500			
E.	Printing cartridges	Nos	0				
F.	E-Waste (Desktop,CPU,Printer&Mouse.etc.)	Nos	1	1			
G.	Medical Waste	Kg	0				
3. Sewage Waste & Wastewater							
A.	Treated sewage wastewater	Ltr					
B.	Sewage Sludge	Ltr					
C.	Wastewater	Ltr					



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TRANSRAIL		TRANSRAIL LIGHTING LIMITED					
Project Name: _____		MONTHLY WASTE GENERATION REPORT - PROJECT					
Month: July 2023		Form No.: TransrailCorr/HSE/WMS/023 Rev. No: 01 Date: 12.08.2019					
Sr. No.	Waste Generation Type	Unit	Generation for the Month(Dty)	Handled	Recycled	Disposed	Remarks (Dispose by 15days)
1. Non-Hazardous Waste							
A. General Waste							
i	Hand Gloves	Pairs	30	30			
ii	PP Ropes	Kg	0				
iii	Safety Harness	Nox	20			20	
iv	Safety Shoes	Pairs	10			10	
v	Carbon Brush	Kg	0				
vi	Safety Harness	Nox	0				
B. Metal Waste							
i	Conductor Bits	Kg	0				
ii	Steel	TON	1		1		
iii	Other Metals " "	Kg	0				
C. Mixed Waste							
i	Food Waste	Kg	0				
ii	Plastic Waste	Kg	0				
iii	Mixed Construction Waste	Kg	2	2			
iv	Packing Material (Like - Conductor Drum/Insulator/Other)	Kg	0				
v	Other Non-Hazardous Waste " "	Kg	0				
2. Hazardous Waste							
i	Paints Residue	Kg	0				
ii	Adhesives and Sealants (Silicon Gel)	Ltr	0				
iii	Lubricants (Used Oil)	Ltr	0				
iv	Solvents (Thinner, Spirit, Acetone)	Ltr	0				
v	Batteries	Nox	0				
vi	Oil Filters	Kg	0				
vii	Plastic Waste	Kg	0				
viii	Cement Bags	Pcs	1,500	1,500			
ix	Used Binding Adhesive " "	Sh	0				
x	Used Paint Tins	Kg	1	1			
xi	Printing Cartridges	Nox	0	0			
xii	Used absorbents (Dry rags/Dry cloths)	Kg	0				
xiii	E-Waste (Desktop, CPU, Printer, Mouse, Cables, Fluorescent Bells etc.)	Kg	0				
xiv	Medical waste	Kg	0				
3. Sewage Waste & Waste water							
i	Treated Sewage Waste (flow)	Ltr					
ii	Sewage Sludge	Ltr					
iii	Waste Water (Civil Project)	Ltr					

Note: 1. This data should be reached on or before 7th of every month at HQ - HSE Dept. If not applicable, then mark (NA)
2. Data to be maintained by Plant/Project store person with the help of safety/ respective HOD & monitoring by Project/Plant HSE Person.

TRANSRAIL		TRANSRAIL LIGHTING LIMITED					
		MONTHLY WASTE GENERATION REPORT - PROJECT					
Project Name:-						Format No.: Transrail/Genet/MS/WMS/023	
Month: <u>aug</u> 2023						Rev. No. 01	
						Date: 12.08.2019	
Sr. No.	Waste Generation Type	Unit	Generation for the Month (Qty.)	Reused	Recycled	Disposed	Remarks (Signed by T/Person)
C. Non-Hazardous Waste							
a. General Waste							
i	Hand Gloves	Pairs	50	50			
ii	PP Ropes	Kg	5				
iii	Safety Helmet	Nos.	15			15	
iv	Safety Shoes	Pairs	10			10	
v	Cardboard Boxes	Kg	5				
vi	Safety Harness	Nos.	5				
b. Metal Waste							
i	Conductor Sls	Kg	5				
ii	Steel	TON	1		1		
iii	Other Metals "	Kg	5				
iv	Wood Waste	Kg	5				
v	Paint Waste	Kg	5				
vi	Plaster Waste	Kg	5	5			
vii	Mixed Construction Waste	Kg	5				
viii	Packing Material (Like-Conductor Drum/Insulator/Other)	Kg	5				
ix	Other Non-Hazardous Waste "	Kg	5				
d. Hazardous Waste							
i	Paints Residues	Kg	5				
ii	Adhesives and Sealants (Silicon Gel)	Ltr	5				
iii	Lubricants (Used Oil)	Ltr	5				
iv	Solvents (Thinners, Spirit, Acetone)	Ltr	5				
v	Batteries	Nos.	5				
vi	Oil Filters	Kg	5				
vii	Plastic Waste	Kg	5				
viii	Cement Bags	Nos.	1,500	1,500			
ix	Used Blasting Adhesive "	ton	5				
x	Used Paint Tins	Kg	1	1			
xi	Printing Cartridge	Nos.	5	5			
xii	Used absorbents (Oil rags Oil cotton)	Kg	5				
xiii	E-Waste (Desktop, CPU, Printer, Monitor, Cables, Fluorescent Sls etc.)	Kg	5				
xiv	Medical waste	Kg	5				
f. Sewage Waste & Waste water							
i	Treated Sewage Waste Water	Ltr					
ii	Sewage Sludge	Ltr					
iii	Waste Water (Out Project)	Ltr					

Note: 1. This data should be reached on or before 7th of every month at HQ - HSE Dept. (If not applicable, then mark-NA)
2. Data to be maintained by Plant/Project store person with the help of Safety/ respective HOD & monitoring by Project/Plant HSE Person.

TRANSRAIL		TRANSRAIL LIGHTING LIMITED					
MONTHLY WASTE GENERATION REPORT - PROJECT							
Project Name: G-473		Form No.: Transrail/Cons.MSE/005/021					
Month: SEP 2023		Rev. No: 01 Date: 13.09.2019					
Sl. No.	Waste Generation Type	Unit	Generation for the Month (Qty.)	Reused	Recycled	Disposed	Remarks (Disposed by IP/other)
1. Non-Hazardous Waste							
A. General Waste							
i	Hard Gloves	Pair	25			25	
ii	PP Shoes	kg	5				
iii	Safety Helmet	nos	5			5	
iv	Safety Shoes	Pair	6			6	
v	Canvas Shoes	kg	0				
vi	Safety Harness	nos	5				
B. Metal Waste							
i	Conductor Bits	kg	5				
ii	Steel	TON	0				
iii	Other Metals *	kg	0				
iv	Wood Waste	kg	5				
v	Food Waste	kg	0				
vi	Paper Waste	kg	2				
vii	Mixed Construction Waste	kg	0				
viii	Packing Material Like - Conductor Drums/Insulator/Other	kg	0				
ix	Other Non-Hazardous Waste *	kg	0				
2. Hazardous Waste							
i	Paints Residues	kg	0				
ii	Adhesives and Sealants (Silicon Seal)	lit	0				
iii	Lubricants (Used Oil)	lit	0				
iv	Solvents (Thinner, Spirit, Acetone)	lit	0				
v	Batteries	nos	0				
vi	Oil Filters	kg	0				
vii	Plastic Waste	kg	0				
viii	Cement Bags	nos	1,000	1,000			
ix	Used Binding Adhesive *	nos	0				
x	Used Paint Tins	kg	0				
xi	Printing Cartridges	nos	6	6			
xii	Used absorbents (Oil rags; Oil cotton)	kg	0				
xiii	E-Waste (Keyboard, CPU, Printer, Mouse, Cables, Fluorescent Tubes etc.)	kg	0				
xiv	Medical waste	kg	0				
3. Sewage Waste & Waste water							
i	Treated Sewage Waste Water	Lit					
ii	Sewage Sludge	Lit					
iii	Waste Water (Civil Project)	Lit					

Notes: 1. This data should be reached on or before 7th of every month at RO - MSE Dept. (If not applicable, then mark-NA)
2. Data to be maintained by Plant/Project store person with the help of Safety/ respective NCO & monitoring by Project/Plant MSE Person.

TRANSRAIL		TRANSRAIL LIGHTING LIMITED					
MONTHLY WASTE GENERATION REPORT - PROJECT							
Project Name:				Format No.: Transrail/Env/HS/WMS/013			
Month: OCT 2023				Rev. No: 01			
				Date: 11.09.2019			
Sr. No.	Waste Generation Type	Unit	Generation for the Month(Dy.)	Reused	Recycled	Disposed	Remarks (Disposed by EP/own)
1. Non-Hazardous Waste							
a. General Waste							
i	Hand Gloves	Pairs	20			20	
ii	PP Pipes	Kg	3				
iii	Safety Helmet	No.	10				
iv	Safety Shoes	Pairs	4			4	
v	Carson Shoes	Kg	0				
vi	Safety harness	No.	0				
b. Metal Waste							
i	Conductor Bits	Kg	0				
ii	Steel	TCH	1		1		
iii	Other Metals *	Kg	0				
c	Wood Waste	Kg	0				
d	Ford Waste	Kg	0				
e	Paper Waste	Kg	3				
f	Mixed Construction Waste	Kg	0				
g	Packing Material (Like - Conductor Drum/Insulator/Other)	Kg	0				
h	Other Non-Hazardous Waste *	Kg	0				
2. Hazardous Waste							
i	Paints Residue	Kg	0				
ii	Adhesives and Sealants (Silicon Gel)	Ltr	0				
iii	Substrates (Used CG)	Ltr	0				
iv	Solvents (Thinner, Spirit, Acetone)	Ltr	0				
v	Batteries	No.	0				
vi	Oil Filters	Kg	0				
vii	Plastic Waste	Kg	0				
viii	Cement Bags	No.	100	100			
ix	Used Blasting Adhesive *	Ltr	0				
x	Used Paint Tins	Kg	0				
xi	Printing Cartridges	No.	3	3			
xii	Used absorbents (Oil spill/ Oil cotton)	Kg	0				
xiii	E-Waste (Desktops, CPU, Printer, Mouse, Cables, Fluorescent Bells etc.)	Kg	0				
xiv	Medical waste	Kg	0				
3. Sewage Waste & Waste water							
a	Treated Sewage Waste Water	Ltr					
b	Sewage Sludge	Ltr					
c	Waste Water (Civil Project)	Ltr					

Note: 1. This data should be reached on or before 7th of every month at HQ - HSE Dept. (If not applicable, then mark N/A)
2. Data to be maintained by Plant/Project store person with the help of Safety/ respective HOD & monitoring by Project/Plant HSE Person.

For Transrail Lighting Ltd.

TRANSRAIL		TRANSHAIL LIGHTING LIMITED					
MONTHLY WASTE GENERATION REPORT - PROJECT							
Project Name:-		Month: NOV 2023				Format No.: Transrail/Const/HSE/WMS/023 Rev. No. 01 Date: 13.09.2019	
Sr. No.	Waste Generation Type	Unit	Generation for the Month (Qty.)	Reused	Recycled	Disposed	Remarks (Dispose by (P/Plant))
1. Non-Hazardous Waste							
a. General Waste							
i	Hand Gloves	Pairs	30	30			
ii	PP Ropes	Kg	0				
iii	Safety Helmet	Nos	10			10	
iv	Safety Shoes	Pairs	5			5	
v	Carbon Boxes	Kg	0				
vi	Safety Harness	Nos	0				
b. Metal Waste							
i	Conductor Bits	Kg	0				
ii	Steel	TON	1		1		
iii	Other Metals "	Kg	0				
c	Wood Waste	Kg	0				
d	Food Waste	Kg	0				
e	Paper Waste	Kg	0				
f	Mixed Construction Waste	Kg	0				
g	Packing Material (Like -Conductor Drum/Insulator/Other)	Kg	0				
h	Other Non-Hazardous Waste "	Kg	0				
2. Hazardous Waste							
i	Paints Residues	Kg	0				
ii	Adhesives and Sealants (Silicon Gel)	Ltr	0				
iii	Lubricants (Used Oil)	Ltr	0				
iv	Solvents (Thinner, Spirit, Acetone)	Ltr	0				
v	Batteries	Nos	0				
vi	Oil Filters	Kg	0				
vii	Plastic Waste	Kg	0				
viii	Cement Bags	Nos	2,500	2,500			
ix	Used Blasting Adhesive "	ton	0				
x	Used Paint Tins	Kg	0				
xi	Printing Cartridges	Nos	3	3			
xii	Used absorbents (Oil rags/ Oil soaker)	Kg	0				
xiii	E-Waste (Desktop, CPU, Printer, Mouse, Cables, Fluorescent tube etc.)	Kg	0				
xiv	Medical waste	Kg	0				
3. Sewage Waste & Wastewater							
a	Treated Sewage Waste Water	Ltr					
b	Sewage Sludge	Ltr					
c	Waste Water (Civil Project)	Ltr					

Note: 1. This data should be reached on or before 7th of every month at HO - HSE Dept. (If not applicable, then mark NA)
2. Data to be maintained by Plant/Project store person with the help of Safety/ respective NOD & monitoring by Project/Plant HSE Person.

For Transrail Lighting Ltd

Annexure-22: Safety Signs at Site



Annexure-23: Status of CAP



Safety Guard for Rotating Equipment



All materials are well covered at site



Temporary Resting Place at Site



Temporary Toilet facilities at site



Materials stored at the designated area in Bagerhat Store



Plastic and Poly waste storage at Site



Briefing on Health and Safety Initiatives (Gopalganj- Shibchar TL)



Workers Accommodation



Workers' Toilet



First Aid Box at site



Emergency Contact numbers displayed at Store



Machinery in Good and Covered Condition



Piling Mud Drain



Inside Workers Accommodation at Birganj camp sites



Solid fencing and security lighting at site



Grievance box near construction site



Firefighting Equipment in Store



Group Insurance



Fire Drill



Pile Integrity Test at Domar-Hatibandha 132kV Transmission Line



Piling Work at Satkhira-Rupsha 230 kV Transmission Line



Erected Tower of Gopalganj-Shibchar 230 kV Transmission Line



Erected Tower of Gopalganj-Shibchar 230 kV Transmission Line



Erected Tower of Satkhira- Rupsha Transmission Line



Erected Tower of Kaliganj- Maheshpur Transmission Line



Training on HSE at Sites



Motivational Program for Workmen



Medical Camp for Dengu Fever at Duamriya



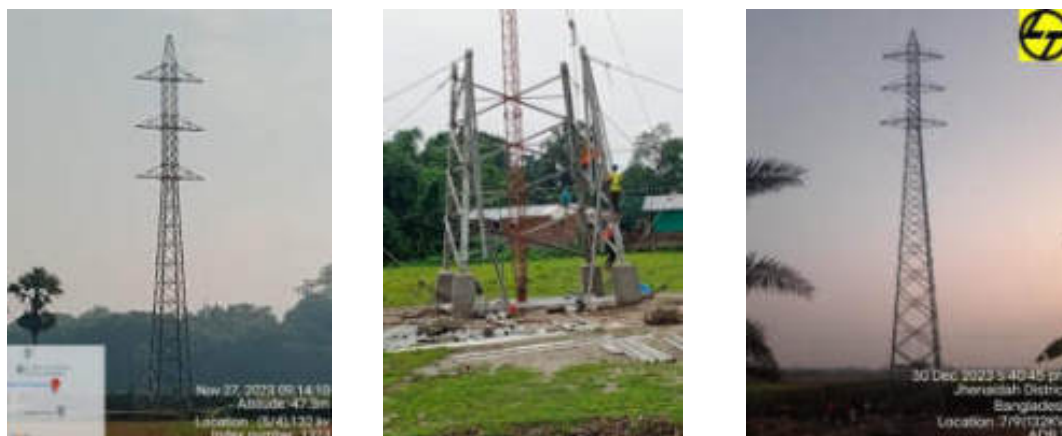
Tree Plantation



Handing Over Crops Compensation to the Owners



Inspection of land development, compaction test and Transmission line construction activities



Erected Tower in Package 3 and 4



Ongoing Activities at Site





ED (P&D) and PD having community level discussions along with contractor's representative



Community Engagement Program at Project Site



PGCB's internal audit at contractor's site office



FAPAD audit at contractor's store

Annexure-24: Pre-Work Briefing



Annexure 25: Clearance from BIWTA for River Crossing

https://drive.google.com/drive/folders/10RVE4woW-0QahmNMEURNXlaSFYPT04wy?usp=drive_link

Annexure 26: Crops Rate from Agricultural Office

https://drive.google.com/drive/folders/1V49CNRxW2XRu_XbxRuHtYvFSPMUOiutT?usp=drive_link

Annexure 27: Environmental Monitoring Checklist

Environmental Monitoring and Audit Checklist for Substation

*OFFICIAL USE ONLY

Environmental Audit Checklist for Substations

Guidelines Considered			Satkhira	Purba Sadipur	Niamatpur
Transformers with PCB			No	No	No
Switchgear with PCB			No	No	No
Safe disposal of PCB oil			NA	NA	NA
Prevention of PCB fires			NA	NA	NA
PCB Labelling			NA	NA	NA
PCB oil leakage			NA	NA	NA
Retrofitting			NA	NA	NA
PCB oil Storage			NA	NA	NA
Gas insulated switchgear			NA	Yes	NA
Gas insulated t/f			No	No	No
Presence of SF ₆ in switchgear			Yes	Yes	Yes
SF ₆ retrieval arrangements			-	-	-
Presence of other hazardous gases			NA	NA	NA
Containment, Dikes, and Berms (e.g. for transformers)			yes	yes	yes
Storage facility			yes	yes	yes
Drainage			yes	yes	yes
Oil leakage			NA	NA	NA
Need for extra gravel			No	No	No
Monitoring of workplace air quality			NA	NA	NA
Good ventilation (ensure)			Yes	Yes	Yes
Maintenance of air quality			NA	NA	NA
Providence of respiratory equipment			Yes	Yes	Yes
Enforcement of the application of personal protective equipment whenever exposure levels of fumes, solvents and other materials exceed threshold limit			Yes	Yes	Yes
Noise control equipment			NA	NA	NA
IFC/ EHS Noise levels					
Ambient Noise (dB)	Day	Night	Yes	Yes	Yes
Residential	55	45			
Industrial	70	70			
Maintenance of equipment			Yes	Yes	Yes
Use of protective gear when noise level exceeds 85 dB			NA	NA	NA
Safe working area (absence of radiation, magnetic fields)			Yes	Yes	Yes
Monitor regularly for radiation and field levels and equipment integrity (earthing, protective shields, lockouts etc.)			Yes	Yes	Yes
Strict procedure for de-energizing before working on electrical equipment			Yes	Yes	Yes
Training of personnel for safety procedures			Yes	Yes	Yes
Physical factors in the workplace signage			Yes	Yes	Yes
Lighting (including security lights)			Yes	Yes	Yes
Fire detection mechanism/equipment			Yes	Yes	Yes
Firefighting equipment			Yes	Yes	Yes
Cleanliness (inside and outside substation)			Yes	Yes	Yes
First Aid Kit			Yes	Yes	Yes
Features that pose safety risks (missing or broken slabs, dogged holes, etc.)			No	No	No

*OFFICIAL USE ONLY

Fence or enclosure of the site (Restriction of unauthorized people)	Yes	Yes	Yes
Safe and clean drinking water	Yes	Yes	Yes
Toilets	Yes	Yes	Yes
TV/Radio/Internet	Yes	Yes	Yes
Guard kiosk	Yes	Yes	Yes
Eye and face	-	-	-
Head	-	-	-
Hearing	-	-	-
Hand	-	-	-
Respiratory	-	-	-
Leg and body	-	-	-
Noise	-	-	-
Vibration	-	-	-
Illumination	NA	NA	NA
Reflections	NA	NA	NA
Temperature	NA	NA	NA
Hazardous materials	NA	NA	NA
Biological agents	NA	NA	NA
Ionization radiation	NA	NA	NA
Training (Learning materials, equipment and tools)	Yes	Yes	Yes
Training on operational hazardous and how to control the hazards	Yes	Yes	Yes
Training on health risks, hygiene, and exposure prevention	Yes	Yes	Yes
Training on accidents and accident prevention, protective equipment and clothing	Yes	Yes	Yes
OHSMS organization policy	Yes	Yes	Yes
Emergency prevention, preparedness and response	Yes	Yes	Yes
Investigation of work related injuries, ill health, disease and accidents	Yes	Yes	Yes
Safety inspection, testing and calibration	Yes	Yes	Yes
Storage	NA	NA	NA
Labelling	NA	NA	NA
Handling	NA	NA	NA
Handling	NA	NA	NA
Disposal	NA	NA	NA
Availability of space for expansion	Yes	Yes	Yes

OHSMS: Occupational Health & Safety Management System

NA Not Applicable

< Yes/OK

X No

<YF Yes, on transformers

<CB Yes, on oil Circuit Breakers

<AC Yes, with no conditions

<NI It is there, but Need Improvements

NI Need Improvements

SS Substation

NT Need Training

NR Need some Repair

MM Need Maintenance

<Can Yes, it is contaminated

Environmental Monitoring Checklist for Transmission line

Package 4

Environmental Monitoring Checklist for Transmission Line			
Project:	Bagerhat - Pirojpur Bhondaria 132kV	Site Location:	23/1
Route and Package:	Package-4	Inspection Date:	29.11.23
Inspected by:	K. K. Mabbila	Inspection Time:	9.30 am
Approved by:			

Inspection Items	Implemented		N/A
	Yes	No	
Air Pollution Control			
Are the construction sites watered to minimize dust generated?	Yes		
Are stockpiles of dusty materials (size with more than 20 bags cement) covered or watered?	Yes		
Are all vehicles carrying dusty loads covered/watered over prior to leaving the site?	Yes		
Are demolition work areas watered?	Yes		
Are dusty roads sprayed with water?	Yes		
Are sites and equipment well maintained? (any black smoke observed, please indicate the sites/equipment and location)	Yes		
Is dark smoke controlled from sites?	Yes		
Are there enclosures around the main dust-generating activities? (e.g. dismantling)	Yes		
Signage provided along sites and properly maintained (any damage / opening observed, please indicate the location)	Yes		
Are speed control measures applied? (e.g. speed limit sign)	Yes		
Others (please specify)			
Water Pollution Control			
Are there any water discharge?		No	
Are all manholes on-site covered and sealed?	Yes		
Are sandbags/earth bund adopted to prevent washing away of sand/silt and wastewater to drains, catch pit, public road and footpath?	Yes		
Are vehicles cleaned before leaving the sites?	Yes		
Are wheel washing facilities well maintained to prevent overflow, flooding sediment?	Yes		
Is the public road/area around site hoarding kept clean and free of muddy water?	Yes		
Is domestic water directed to septic tanks or chemical toilets?	Yes		
Others (please specify)			
Noise Control			
Is dismantling activities take place during restricted hours?		No	
Are motors used for construction well maintained?	Yes		
Do air compressors operate with doors closed?			N/A
Is idle equipment turned off or throttled down?	Yes		

Inspection Items	Implemented		N/A
	Yes	No	
Any noise mitigation measures adopted (e.g. use noise barrier / enclosure)?	Yes		
Are silenced equipment utilized?	Yes		
Others (please specify)			
Waste Management			
Is the site kept clean and tidy? (e.g. litter free, good housekeeping)	Yes		
Are separate chutes used for inert and non-inert wastes?	Yes		
Are separated labelled containers / areas provided for facilitating recycling and waste segregation?	Yes		
Are construction wastes / recyclable wastes and general refuse removed off site regularly?	Yes		Filup lowland area.
Are construction wastes collected and disposed of properly by licensed collectors?		NO	
Are chemical wastes, if any, collected and disposed of properly by licensed collectors?		NO	
Does chemical waste producer license covers all major chemical wastes produced on site?		NO	
Are chemical wastes properly stored and labelled?	Yes		
Are oil drums and equipment provided with drip trays?	Yes		
Are drip trays free of oil and water?	Yes		
Is there any oil spillage? Clean-up the contaminated soil immediately?	Yes		
Is litter, foam or other objectionable matters in nearby water drain/sewer cleaned?		NO	
Are asbestos wastes handled by registered professionals?		NO	
Others (please specify)			
Storage of Chemicals and Dangerous Goods			
Are chemicals stored and labelled properly?	Yes		
Are proper measures to control oil spillage during maintenance or to control other chemicals spillage? (e.g. provide drip trays)	Yes		
Are spill kits / sand / saw dust used for absorbing chemical spillage readily accessible?	Yes		
Do the space of battery banks have proper ventilation?			N/A
Are the space of battery banks temperature controlled?			N/A
Do the area of battery banks have adequate fire extinguishers, spill kits?			N/A
Are the handling of batteries followed as per guidelines?			N/A
Others (please specify)			
Protection of Flora, Fauna and Historical Heritage			
Are disturbance to terrestrial flora minimized (e.g. to be preserved)?	Yes		
Are disturbance to terrestrial fauna minimized (if rare species identified)?	NO		Not found rare species.
Any historical heritage exists on site? If yes, ensure appropriate measures taken to preserve it			N/A
Others (please specify)			
Resource Conservation			
Is water recycled wherever possible for dust suppression?	Yes		
Is water pipe leakage and wastage prevented?	Yes		

Inspection Items	Implemented		N/A
	Yes	No*	
Are diesel-powered equipment shut off while not in use to reduce excessive use?	Yes		
Are energy conservation practices adopted?	Yes		
Are metal or other alternatives used to minimize the use of timber?	Yes		
Are materials stored in good condition to prevent deterioration and wastage (e.g. covered, separated)?	Yes		
Are pesticides used under the requirement of Agriculture, Fishers and Conservation Department?		No	
Others (please specify)			
Emergency Preparedness and Response			
Are fire extinguishers / fighting facilities properly maintained and not expired? Escape not blocked / obstructed?	Yes		
Are accidents and incidents reported and reviewed, and corrective & preventive actions identified and recorded?	Yes		
Others (please specify)			



Environmental Monitoring Checklist for Transmission Line			
Project:	Niyamatpur-Patniala	Site Location:	13/1
Route and Package:	Package-4		
Inspection Date:	09.12.23	Inspection Time:	11:30 Am.
Inspected by:	K.K. Mahanta	Approved by:	

Inspection Items	Implemented		N/A
	Yes	No	
Air Pollution Control			
Are the construction sites watered to minimize dust generated?	Yes		
Are stockpiles of dusty materials (size with more than 20 bags cement) covered or watered?	Yes		
Are all vehicles carrying dusty loads covered/watered over prior to leaving the site?	Yes		
Are demolition work areas watered?	Yes		
Are dusty roads sprayed with water?	Yes		
Are sites and equipment well maintained? (any black smoke observed, please indicate the sites/equipment and location)	Yes		
Is dark smoke controlled from sites?	Yes		
Are there enclosures around the main dust-generating activities? (e.g. dismantling)	Yes		
Signage provided along sites and properly maintained (any damage / opening observed, please indicate the location)	Yes		
Are speed control measures applied? (e.g. speed limit sign)	Yes		
Others (please specify)			
Water Pollution Control			
Are there any water discharge?		NO	
Are all manholes on-site covered and sealed?	Yes		
Are sandbags/earth bund adopted to prevent washing away of sand/silt and wastewater to drains, catch pit, public road and footpath?	Yes		
Are vehicles cleaned before leaving the sites?	Yes		
Are wheel washing facilities well maintained to prevent overflow, flooding sediment?	Yes		
Is the public road/area around site hoarding kept clean and free of muddy water?	Yes		
Is domestic water directed to septic tanks or chemical toilets?	NO		
Others (please specify)			
Noise Control			
Is dismantling activities take place during restricted hours?		NO	
Are motors used for construction well maintained?	Yes		
Do air compressors operate with doors closed?			N/A
Is idle equipment turned off or throttled down?	Yes		

Inspection Items	Implemented		N/A
	Yes	No	
Any noise mitigation measures adopted (e.g. use noise barrier / enclosure)?	Yes		
Are silenced equipment utilized?	Yes		
Others (please specify)			
Waste Management			
Is the site kept clean and tidy? (e.g. litter free, good housekeeping)	Yes		
Are separate chutes used for inert and non-inert wastes?	Yes		
Are separated labelled containers / areas provided for facilitating recycling and waste segregation?	Yes		
Are construction wastes / recyclable wastes and general refuse removed off site regularly?	Yes		Fill up lowland area
Are construction wastes collected and disposed of properly by licensed collectors?		NO	
Are chemical wastes, if any, collected and disposed of properly by licensed collectors?		NO	
Does chemical waste producer license covers all major chemical wastes produced on site?		NO	
Are chemical wastes properly stored and labelled?	Yes		Space of batteries area
Are oil drums and equipment provided with drip trays?	Yes		
Are drip trays free of oil and water?	Yes		
Is there any oil spillage? Clean-up the contaminated soil immediately?	Yes		
Is litter, foam or other objectionable matters in nearby water drain/sewer cleaned?		NO	
Are asbestos wastes handled by registered professionals?		NO	
Others (please specify)			
Storage of Chemicals and Dangerous Goods			
Are chemicals stored and labelled properly?	Yes		
Are proper measures to control oil spillage during maintenance or to control other chemicals spillage? (e.g. provide drip trays)	Yes		
Are spill kits / sand / saw dust used for absorbing chemical spillage readily accessible?	Yes		
Do the space of battery banks have proper ventilation?			N/A
Are the space of battery banks temperature controlled?			N/A
Do the area of battery banks have adequate fire extinguishers, spill kits?			N/A
Are the handling of batteries followed as per guidelines?			N/A
Others (please specify)			
Protection of Flora, Fauna and Historical Heritage			
Are disturbance to terrestrial flora minimized (e.g. to be preserved)?	Yes		
Are disturbance to terrestrial fauna minimized (if rare species identified)?	Yes		no + found Rare species
Any historical heritage exists on site? If yes, ensure appropriate measures taken to preserve it			N/A
Others (please specify)			
Resource Conservation			
Is water recycled wherever possible for dust suppression?	Yes		
Is water pipe leakage and wastage prevented?	Yes		

Inspection Items	Implemented		N/A
	Yes	No*	
Are diesel-powered equipment shut off while not in use to reduce excessive use?	yes		
Are energy conservation practices adopted?	yes		
Are metal or other alternatives used to minimize the use of timber?	yes		
Are materials stored in good condition to prevent deterioration and wastage (e.g. covered, separated)?	yes		
Are pesticides used under the requirement of Agriculture, Fishers and Conservation Department?		NO	
Others (please specify)			
Emergency Preparedness and Response			
Are fire extinguishers / fighting facilities properly maintained and not expired? Escape not blocked / obstructed?	yes		
Are accidents and incidents reported and reviewed, and corrective & preventive actions identified and recorded?	yes		
Others (please specify)			



2-

Environmental Monitoring Checklist for Transmission Line			
Project:	250KV Purbasadi Pur - Damar	Site Location:	24/0
Route and Package:	Package-4	Inspection Time:	3:30pm
Inspection Date:	24.9.23	Approved by:	
Inspected by:	K.K. Mahanta		

Inspection Items	Implemented		N/A
	Yes	No	
Air Pollution Control			
Are the construction sites watered to minimize dust generated?	Yes		
Are stockpiles of dusty materials (size with more than 20 bags cement) covered or watered?	Yes		
Are all vehicles carrying dusty loads covered/watered over prior to leaving the site?	Yes		
Are demolition work areas watered?	Yes		
Are dusty roads sprayed with water?	Yes		
Are sites and equipment well maintained? (any black smoke observed, please indicate the sites/equipment and location)	Yes		
Is dark smoke controlled from sites?	Yes		
Are there enclosures around the main dust-generating activities? (e.g. dismantling)	Yes		
Signage provided along sites and properly maintained (any damage / opening observed, please indicate the location)	Yes		
Are speed control measures applied? (e.g. speed limit sign)	Yes		
Others (please specify)			
Water Pollution Control			
Are there any water discharge?		NO	
Are all manholes on-site covered and sealed?	Yes		
Are sandbags/earth bund adopted to prevent washing away of sand/silt and wastewater to drains, catch pit, public road and footpath?	Yes		
Are vehicles cleaned before leaving the sites?	Yes		
Are wheel washing facilities well maintained to prevent overflow, flooding sediment?	Yes		
Is the public road/area around site hoarding kept clean and free of muddy water?	Yes		
Is domestic water directed to septic tanks or chemical toilets?	Yes		
Others (please specify)			
Noise Control			
Is dismantling activities take place during restricted hours?		NO	
Are motors used for construction well maintained?	Yes		
Do air compressors operate with doors closed?			N/A
Is idle equipment turned off or throttled down?	Yes		

Inspection Items	Implemented		N/A
	Yes	No	
Any noise mitigation measures adopted (e.g. use noise barrier / enclosure)?	Yes		
Are silenced equipment utilized?	Yes		
Others (please specify)			
Waste Management			
Is the site kept clean and tidy? (e.g. litter free, good housekeeping)	Yes		
Are separate chutes used for inert and non-inert wastes?	Yes		
Are separated labelled containers / areas provided for facilitating recycling and waste segregation?	Yes		
Are construction wastes / recyclable wastes and general refuse removed off site regularly?	Yes		
Are construction wastes collected and disposed of properly by licensed collectors?		No	
Are chemical wastes, if any, collected and disposed of properly by licensed collectors?		No	
Does chemical waste producer license covers all major chemical wastes produced on site?		No	
Are chemical wastes properly stored and labelled?	Yes		
Are oil drums and equipment provided with drip trays?	Yes		
Are drip trays free of oil and water?	Yes		
Is there any oil spillage? Clean-up the contaminated soil immediately?	Yes		
Is litter, foam or other objectionable matters in nearby water drain/sewer cleaned?		No	
Are asbestos wastes handled by registered professionals?		No	
Others (please specify)			
Storage of Chemicals and Dangerous Goods			
Are chemicals stored and labelled properly?	Yes		
Are proper measures to control oil spillage during maintenance or to control other chemicals spillage? (e.g. provide drip trays)	Yes		
Are spill kits / sand / saw dust used for absorbing chemical spillage readily accessible?	Yes		
Do the space of battery banks have proper ventilation?			N/A
Are the space of battery banks temperature controlled?			N/A
Do the area of battery banks have adequate fire extinguishers, spill kits?			N/A
Are the handling of batteries followed as per guidelines?			N/A
Others (please specify)			
Protection of Flora, Fauna and Historical Heritage			
Are disturbance to terrestrial flora minimized (e.g. to be preserved)?	Yes		
Are disturbance to terrestrial fauna minimized (i.e. rare species identified)?	Yes		Not from rare species found.
Any historical heritage exists on site? if yes, ensure appropriate measures taken to preserve it			N/A
Others (please specify)			
Resource Conservation			
Is water recycled wherever possible for dust suppression?	Yes		
Is water pipe leakage and wastage prevented?	Yes		

Inspection Items	Implemented		N/A
	Yes	No*	
Are diesel-powered equipment shut off while not in use to reduce excessive use?	YES		
Are energy conservation practices adopted?	YES		
Are metal or other alternatives used to minimize the use of timber?	YES		
Are materials stored in good condition to prevent deterioration and wastage (e.g. covered, separated)?	YES		
Are pesticides used under the requirement of Agriculture, Fishers and Conservation Department?		NO	
Others (please specify)			
Emergency Preparedness and Response			
Are fire extinguishers / fighting facilities properly maintained and not expired? Escape not blocked / obstructed?	YES		
Are accidents and incidents reported and reviewed, and corrective & preventive actions identified and recorded?	YES		
Others (please specify)			



Environmental Monitoring Checklist for Transmission Line			
Project:	Damar - Haribondha 132 kV	Site Location:	31/1
Route and Package:	Package-4.	Inspection Time:	5 pm.
Inspection Date:	25.10.23.	Inspected by:	K. C. Mahanta.
Inspected by:	K. C. Mahanta.	Approved by:	

Inspection Items	Implemented		N/A
	Yes	No	
Air Pollution Control			
Are the construction sites watered to minimize dust generated?	Yes		
Are stockpiles of dusty materials (size with more than 20 bags cement) covered or watered?	Yes		
Are all vehicles carrying dusty loads covered/watered over prior to leaving the site?	Yes		
Are demolition work areas watered?	Yes		
Are dusty roads sprayed with water?	Yes		
Are sites and equipment well maintained? (any black smoke observed, please indicate the sites/equipment and location)	Yes		
Is dark smoke controlled from sites?	Yes		
Are there enclosures around the main dust-generating activities? (e.g. dismantling)	Yes		
Signage provided along sites and properly maintained (any damage / opening observed, please indicate the location).	Yes		
Are speed control measures applied? (e.g. speed limit sign)	Yes		
Others (please specify)			
Water Pollution Control			
Are there any water discharge?		NO	
Are all manholes on-site covered and sealed?	Yes		
Are sandbags/earth bund adopted to prevent washing away of sand/silt and wastewater to drains, catch pit, public road and footpath?	Yes		
Are vehicles cleaned before leaving the sites?	Yes		
Are wheel washing facilities well maintained to prevent overflow, flooding sediment?	Yes		
Is the public road/area around site hoarding kept clean and free of muddy water?	Yes		
Is domestic water directed to septic tanks or chemical toilets?	Yes		
Others (please specify)			
Noise Control			
Is dismantling activities take place during restricted hours?	Yes	NO	
Are motors used for construction well maintained?	Yes		
Do air compressors operate with doors closed?			N/A
Is idle equipment turned off or throttled down?	Yes		

Inspection Items	Implemented		N/A
	Yes	No	
Any noise mitigation measures adopted (e.g. use noise barrier / enclosure)?	Yes		
Are silenced equipment utilized?	Yes		
Others (please specify)			
Waste Management			
Is the site kept clean and tidy? (e.g. litter free, good housekeeping)	Yes		
Are separate chutes used for inert and non-inert wastes?	Yes		
Are separated labelled containers / areas provided for facilitating recycling and waste segregation?	Yes		
Are construction wastes / recyclable wastes and general refuse removed off site regularly?	Yes		Fillup Low Land area
Are construction wastes collected and disposed of properly by licensed collectors?		NO	
Are chemical wastes, if any, collected and disposed of properly by licensed collectors?		NO	
Does chemical waste producer license covers all major chemical wastes produced on site?		NO	
Are chemical wastes properly stored and labelled?	Yes		Storage at barren Land
Are oil drums and equipment provided with drip trays?	Yes		
Are drip trays free of oil and water?	Yes		
Is there any oil spillage? Clean-up the contaminated soil immediately?	Yes		
Is litter, foam or other objectionable matters in nearby water drain/sewer cleaned?		NO	
Are asbestos wastes handled by registered professionals?		NO	
Others (please specify)			
Storage of Chemicals and Dangerous Goods			
Are chemicals stored and labelled properly?	Yes		
Are proper measures to control oil spillage during maintenance or to control other chemicals spillage? (e.g. provide drip trays)	Yes		
Are spill kits / sand / saw dust used for absorbing chemical spillage readily accessible?	Yes		
Do the space of battery banks have proper ventilation?			N/A
Are the space of battery banks temperature controlled?			N/A
Do the area of battery banks have adequate fire extinguisher, spill kits?			N/A
Are the handling of batteries followed as per guidelines?			N/A
Others (please specify)			
Protection of Flora, Fauna and Historical Heritage			
Are disturbance to terrestrial flora minimized (e.g. to be preserved)?	Yes		
Are disturbance to terrestrial fauna minimized (if rare species identified)?	Yes		NO Rare species found
Any historical heritage exists on site? If yes, ensure appropriate measures taken to preserve it			N/A
Others (please specify)			
Resource Conservation			
Is water recycled wherever possible for dust suppression?	Yes		
Is water pipe leakage and wastage prevented?	Yes		

Inspection Items	Implemented		N/A
	Yes	No*	
Are diesel-powered equipment shut off while not in use to reduce excessive use?	Yes		
Are energy conservation practices adopted?	Yes		
Are metal or other alternatives used to minimize the use of timber?	Yes		
Are materials stored in good condition to prevent deterioration and wastage (e.g. covered, separated)?	Yes		
Are pesticides used under the requirement of Agriculture, Fishers and Conservation Department?		No	
Others (please specify)			
Emergency Preparedness and Response			
Are fire extinguishers / fighting facilities properly maintained and not expired? Escape not blocked / obstructed?	Yes		
Are accidents and incidents reported and reviewed, and corrective & preventive actions identified and recorded?	Yes		
Others (please specify)			



Package 3

Environmental Monitoring Checklist for Transmission Line			
Project:	ADB-3 Project	Site Location	SMTL
Route and Package:	SMTL		
Inspection Date:	08/11/23	Inspection Time:	10:00 AM
Inspected by:	Amrapal / Riaz Hussain	Approved by:	Gurnesh Kumar

Inspection Items	Implemented		N/A
	Yes	No*	
Air Pollution Control			
Are the construction sites watered to minimize dust generated?	✓		
Are stockpiles of dusty materials (size with more than 20 bags cement) covered or watered?	✓		
Are all vehicles carrying dusty loads covered/watered over prior to leaving the site?			✓
Are demolition work areas watered?			✓
Are dusty roads sprayed with water?	✓		
Are sites and equipment well maintained? (any black smoke observed, please indicate the sites/equipment and location)	✓		
Is dark smoke controlled from sites?	✓		
Are there enclosures around the main dust-generating activities? (e.g. dismantling)			✓
Signage provided along sites and properly maintained (any damage / opening observed, please indicate the location).	✓		
Are speed control measures applied? (e.g. speed limit sign)	✓		
Others (please specify)			
Water Pollution Control			
Are there any water discharge?	✓		
Are all manholes on-site covered and sealed?	✓		
Are sandbags/earth bund adopted to prevent washing away of sand/silt and wastewater to drains, catch pit, public road and footpath?	✓		
Are vehicles cleaned before leaving the sites?	✓		
Are wheel washing facilities well maintained to prevent overflow, flooding sediment?	✓		
Is the public road/area around site hoarding kept clean and free of muddy water?	✓		
Is domestic water directed to septic tanks or chemical toilets?		✓	
Others (please specify)			
Noise Control			
Is dismantling activities take place during restricted hours?			✓
Are motors used for construction well maintained?	✓		
Do air compressors operate with doors closed?			✓
Is idle equipment turned off or throttled down?	✓		

Inspection Items	Implemented		N/A
	Yes	No*	
Any noise mitigation measures adopted (e.g. use noise barrier / enclosure)?	✓		
Are silenced equipment utilized?	✓		
Others (please specify)			
Waste Management			
Is the site kept clean and tidy? (e.g. litter free, good housekeeping)	✓		
Are separate chutes used for inert and non-inert wastes?	✓		
Are separated labelled containers / areas provided for facilitating recycling and waste segregation?	✓		
Are construction wastes / recyclable wastes and general refuse removed off site regularly?	✓		
Are construction wastes collected and disposed of properly by licensed collectors?	✓		
Are chemical wastes, if any, collected and disposed of properly by licensed collectors?	✓		✓
Does chemical waste producer license covers all major chemical wastes produced on site?			✓
Are chemical wastes properly stored and labelled?			✓
Are oil drums and equipment provided with drip trays?	✓		
Are drip trays free of oil and water?	✓		
Is there any oil spillage? Clean-up the contaminated soil immediately?	✓		
Is litter, foam or other objectionable matters in nearby water drain/sewer cleaned?		✓	
Are asbestos wastes handled by registered professionals?	✓		
Others (please specify)			
Storage of Chemicals and Dangerous Goods			
Are chemicals stored and labelled properly?	✓		
Are proper measures to control oil spillage during maintenance or to control other chemicals spillage? (e.g. provide drip trays)	✓		
Are spill kits / sand / saw dust used for absorbing chemical spillage readily accessible?	✓		
Do the space of battery banks have proper ventilation?			✓
Are the space of battery banks temperature controlled?			✓
Do the area of battery banks have adequate fire extinguishers, spill kits?			✓
Are the handling of batteries followed as per guidelines?			✓
Others (please specify)			
Protection of Flora, Fauna and Historical Heritage			
Are disturbance to terrestrial flora minimized (e.g. to be preserved)?			✓
Are disturbance to terrestrial fauna minimized (if rare species identified)?			✓
Any historical heritage exists on site? If yes, ensure appropriate measures taken to preserve it			✓
Others (please specify)			
Resource Conservation			
Is water recycled wherever possible for dust suppression?	✓		
Is water pipe leakage and wastage prevented?	✓		

Inspection Items	Implemented		N/A
	Yes	No*	
Are diesel-powered equipment shut off while not in use to reduce excessive use?	✓		
Are energy conservation practices adopted?	✓		
Are metal or other alternatives used to minimize the use of timber?	✓		
Are materials stored in good condition to prevent deterioration and wastage (e.g. covered, separated)?	✓		
Are pesticides used under the requirement of Agriculture, Fishers and Conservation Department?	✓		
Others (please specify)			
Emergency Preparedness and Response			
Are fire extinguishers / fighting facilities properly maintained and not expired? Escape not blocked / obstructed?	✓		
Are accidents and incidents reported and reviewed, and corrective & preventive actions identified and recorded?	✓		
Others (please specify)			



Environmental Monitoring Checklist for Transmission Line			
Project:	ADB-3 Project.	Site Location	KMTL.
Route and Package:	KMTL		
Inspection Date:	04/11/23	Inspection Time:	10:30 am
Inspected by:	Asadul AT / Sayyid Khaled?	Approved by:	Gemsh Kumar

Inspection Items	Implemented		N/A
	Yes	No*	
Air Pollution Control			
Are the construction sites watered to minimize dust generated?	✓		
Are stockpiles of dusty materials (size with more than 20 bags cement) covered or watered?	✓		
Are all vehicles carrying dusty loads covered/watered over prior to leaving the site?			✓
Are demolition work areas watered?			✓
Are dusty roads sprayed with water?	✓		
Are sites and equipment well maintained? (any black smoke observed, please indicate the sites/equipment and location)	✓		
Is dark smoke controlled from sites?	✓		
Are there enclosures around the main dust-generating activities? (e.g. dismantling)			✓
Signage provided along sites and properly maintained (any damage / opening observed, please indicate the location).	✓		
Are speed control measures applied? (e.g. speed limit sign)	✓		
Others (please specify)			
Water Pollution Control			
Are there any water discharge?	✓		
Are all manholes on-site covered and sealed?	✓		
Are sandbags/earth bund adopted to prevent washing away of sand/silt and wastewater to drains, catch pit, public road and footpath?	✓		
Are vehicles cleaned before leaving the sites?	✓		
Are wheel washing facilities well maintained to prevent overflow, flooding sediment?	✓		
Is the public road/area around site hoarding kept clean and free of muddy water?	✓		
Is domestic water directed to septic tanks or chemical toilets?		✓	
Others (please specify)			
Noise Control			
Is dismantling activities take place during restricted hours?			✓
Are motors used for construction well maintained?	✓		
Do air compressors operate with doors closed?			✓
Is idle equipment turned off or throttled down?	✓		

Inspection Items	Implemented		N/A
	Yes	No*	
Any noise mitigation measures adopted (e.g. use noise barrier / enclosure)?	✓		
Are silenced equipment utilized?	✓		
Others (please specify)			
Waste Management			
Is the site kept clean and tidy? (e.g. litter free, good housekeeping)	✓		
Are separate chutes used for inert and non-inert wastes?	✓		
Are separated labelled containers / areas provided for facilitating recycling and waste segregation?	✓		
Are construction wastes / recyclable wastes and general refuse removed off site regularly?	✓		
Are construction wastes collected and disposed of properly by licensed collectors?	✓		
Are chemical wastes, if any, collected and disposed of properly by licensed collectors?			✓
Does chemical waste producer license covers all major chemical wastes produced on site?			✓
Are chemical wastes properly stored and labelled?			✓
Are oil drums and equipment provided with drip trays?	✓		
Are drip trays free of oil and water?	✓		
Is there any oil spillage? Clean-up the contaminated soil immediately?	✓		
Is litter, foam or other objectionable matters in nearby water drain/sewer cleaned?		✓	
Are asbestos wastes handled by registered professionals?	✓		
Others (please specify)			
Storage of Chemicals and Dangerous Goods			
Are chemicals stored and labelled properly?	✓		
Are proper measures to control oil spillage during maintenance or to control other chemicals spillage? (e.g. provide drip trays)	✓		
Are spill kits / sand / saw dust used for absorbing chemical spillage readily accessible?	✓		
Do the space of battery banks have proper ventilation?			✓
Are the space of battery banks temperature controlled?			✓
Do the area of battery banks have adequate fire extinguishers, spill kits?			✓
Are the handling of batteries followed as per guidelines?			✓
Others (please specify)			
Protection of Flora, Fauna and Historical Heritage			
Are disturbance to terrestrial flora minimized (e.g. to be preserved)?			✓
Are disturbance to terrestrial fauna minimized (if rare species identified)?			✓
Any historical heritage exists on site? If yes, ensure appropriate measures taken to preserve it			✓
Others (please specify)			
Resource Conservation			
Is water recycled wherever possible for dust suppression?	✓		
Is water pipe leakage and wastage prevented?	✓		

Inspection Items	Implemented		N/A
	Yes	No*	
Are diesel-powered equipment shut off while not in use to reduce excessive use?	✓		
Are energy conservation practices adopted?	✓		
Are metal or other alternatives used to minimize the use of timber?	✓		
Are materials stored in good condition to prevent deterioration and wastage (e.g. covered, separated)?	✓		
Are pesticides used under the requirement of Agriculture, Fishers and Conservation Department?	✓		
Others (please specify)			
Emergency Preparedness and Response			
Are fire extinguishers / fighting facilities properly maintained and not expired? Escape not blocked / obstructed?	✓		
Are accidents and incidents reported and reviewed, and corrective & preventive actions identified and recorded?	✓		
Others (please specify)			



Environmental Monitoring Checklist for Transmission Line			
Project:	ADB-3 Project	Site Location	SRTL
Route and Package:	SRTL		
Inspection Date:	09/11/23	Inspection Time:	11:00 AM
Inspected by:	Arup. AT / Surendra P. S.	Approved by:	Ganesh Chandra

Inspection Items	Implemented		N/A
	Yes	No*	
Air Pollution Control			
Are the construction sites watered to minimize dust generated?	✓		
Are stockpiles of dusty materials (size with more than 20 bags cement) covered or watered?	✓		
Are all vehicles carrying dusty loads covered/watered over prior to leaving the site?			✓
Are demolition work areas watered?			✓
Are dusty roads sprayed with water?	✓		
Are sites and equipment well maintained? (any black smoke observed, please indicate the sites/equipment and location)	✓		
Is dark smoke controlled from sites?	✓		
Are there enclosures around the main dust-generating activities? (e.g. dismantling)			✓
Signage provided along sites and properly maintained (any damage / opening observed, please indicate the location).	✓		
Are speed control measures applied? (e.g. speed limit sign)	✓		
Others (please specify)	—		
Water Pollution Control			
Are there any water discharge?	✓		
Are all manholes on-site covered and sealed?	✓		
Are sandbags/earth bund adopted to prevent washing away of sand/silt and wastewater to drains, catch pit, public road and footpath?	✓		
Are vehicles cleaned before leaving the sites?	✓		
Are wheel washing facilities well maintained to prevent overflow, flooding sediment?	✓		
Is the public road/area around site hoarding kept clean and free of muddy water?	✓		
Is domestic water directed to septic tanks or chemical toilets?	✓		
Others (please specify)	—		
Noise Control			
Is dismantling activities take place during restricted hours?			✓
Are motors used for construction well maintained?	✓		
Do air compressors operate with doors closed?			✓
Is idle equipment turned off or throttled down?	✓		

Inspection Items	Implemented		N/A
	Yes	No*	
Any noise mitigation measures adopted (e.g. use noise barrier / enclosure)?	✓		
Are silenced equipment utilized?	✓		
Others (please specify)			
Waste Management			
Is the site kept clean and tidy? (e.g. litter free, good housekeeping)	✓		
Are separate chutes used for inert and non-inert wastes?	✓		
Are separated labelled containers / areas provided for facilitating recycling and waste segregation?	✓		
Are construction wastes / recyclable wastes and general refuse removed off site regularly?	✓		
Are construction wastes collected and disposed of properly by licensed collectors?	✓		
Are chemical wastes, if any, collected and disposed of properly by licensed collectors?			✓
Does chemical waste producer license covers all major chemical wastes produced on site?			✓
Are chemical wastes properly stored and labelled?			✓
Are oil drums and equipment provided with drip trays?	✓		
Are drip trays free of oil and water?	✓		
Is there any oil spillage? Clean-up the contaminated soil immediately?	✓		
Is litter, foam or other objectionable matters in nearby water drain/sewer cleaned?	.	✓	
Are asbestos wastes handled by registered professionals?	✓		
Others (please specify)			
Storage of Chemicals and Dangerous Goods			
Are chemicals stored and labelled properly?	✓		
Are proper measures to control oil spillage during maintenance or to control other chemicals spillage? (e.g. provide drip trays)	✓		
Are spill kits / sand / saw dust used for absorbing chemical spillage readily accessible?	✓		
Do the space of battery banks have proper ventilation?			✓
Are the space of battery banks temperature controlled?	.		✓
Do the area of battery banks have adequate fire extinguishers, spill kits?			✓
Are the handling of batteries followed as per guidelines?			✓
Others (please specify)			✓
Protection of Flora, Fauna and Historical Heritage			
Are disturbance to terrestrial flora minimized (e.g. to be preserved)?			✓
Are disturbance to terrestrial fauna minimized (if rare species identified)?			✓
Any historical heritage exists on site? If yes, ensure appropriate measures taken to preserve it			✓
Others (please specify)			
Resource Conservation			
Is water recycled wherever possible for dust suppression?	✓		
Is water pipe leakage and wastage prevented?	✓		

Inspection Items	Implemented		N/A
	Yes	No*	
Are diesel-powered equipment shut off while not in use to reduce excessive use?	✓		
Are energy conservation practices adopted?	✓		
Are metal or other alternatives used to minimize the use of timber?	✓		
Are materials stored in good condition to prevent deterioration and wastage (e.g. covered, separated)?	✓		
Are pesticides used under the requirement of Agriculture, Fishers and Conservation Department?	✓		
Others (please specify)			
Emergency Preparedness and Response			
Are fire extinguishers / fighting facilities properly maintained and not expired? Escape not blocked / obstructed?	✓		
Are accidents and incidents reported and reviewed, and corrective & preventive actions identified and recorded?	✓		
Others (please specify)	✓		



Environmental Monitoring Checklist for Transmission Line			
Project:	ADB-2 Project	Site Location	KaMTL.
Route and Package:	KaMTL.		
Inspection Date:	20/11/23	Inspection Time:	11:30 am.
Inspected by:	Arup.AT / Dipanjit Pal.	Approved by:	Gemah Kanti.

Inspection Items	Implemented		N/A
	Yes	No*	
Air Pollution Control			
Are the construction sites watered to minimize dust generated?	✓		
Are stockpiles of dusty materials (size with more than 20 bags cement) covered or watered?	✓		
Are all vehicles carrying dusty loads covered/watered over prior to leaving the site?			✓
Are demolition work areas watered?			✓
Are dusty roads sprayed with water?	✓		
Are sites and equipment well maintained? (any black smoke observed, please indicate the sites/equipment and location)	✓		
Is dark smoke controlled from sites?	✓		
Are there enclosures around the main dust-generating activities? (e.g. dismantling)			✓
Signage provided along sites and properly maintained (any damage / opening observed, please indicate the location).	✓		
Are speed control measures applied? (e.g. speed limit sign)	✓		
Others (please specify)			
Water Pollution Control			
Are there any water discharge?	✓		
Are all manholes on-site covered and sealed?	✓		
Are sandbags/earth bund adopted to prevent washing away of sand/silt and wastewater to drains, catch pit, public road and footpath?	✓		
Are vehicles cleaned before leaving the sites?	✓		
Are wheel washing facilities well maintained to prevent overflow, flooding sediment?	✓		
Is the public road/area around site hoarding kept clean and free of muddy water?	✓		
Is domestic water directed to septic tanks or chemical toilets?	✗	✓	
Others (please specify)			
Noise Control			
Is dismantling activities take place during restricted hours?			✓
Are motors used for construction well maintained?	✓		
Do air compressors operate with doors closed?			✓
Is idle equipment turned off or throttled down?	✓		

Inspection Items	Implemented		N/A
	Yes	No*	
Any noise mitigation measures adopted (e.g. use noise barrier / enclosure)?	✓		
Are silenced equipment utilized?	✓		
Others (please specify)			
Waste Management			
Is the site kept clean and tidy? (e.g. litter free, good housekeeping)	✓		
Are separate chutes used for inert and non-inert wastes?	✓		
Are separated labelled containers / areas provided for facilitating recycling and waste segregation?	✓		
Are construction wastes / recyclable wastes and general refuse removed off site regularly?	✓		
Are construction wastes collected and disposed of properly by licensed collectors?	✓		
Are chemical wastes, if any, collected and disposed of properly by licensed collectors?			✓
Does chemical waste producer license covers all major chemical wastes produced on site?			✓
Are chemical wastes properly stored and labelled?			✓
Are oil drums and equipment provided with drip trays?	✓		
Are drip trays free of oil and water?	✓		
Is there any oil spillage? Clean-up the contaminated soil immediately?	✓		
Is litter, foam or other objectionable matters in nearby water drain/sewer cleaned?		✓	
Are asbestos wastes handled by registered professionals?	✓		
Others (please specify)			
Storage of Chemicals and Dangerous Goods			
Are chemicals stored and labelled properly?	✓		
Are proper measures to control oil spillage during maintenance or to control other chemicals spillage? (e.g. provide drip trays)	✓		
Are spill kits / sand / saw dust used for absorbing chemical spillage readily accessible?	✓		
Do the space of battery banks have proper ventilation?			✓
Are the space of battery banks temperature controlled?			✓
Do the area of battery banks have adequate fire extinguishers, spill kits?			✓
Are the handling of batteries followed as per guidelines?			✓
Others (please specify)			
Protection of Flora, Fauna and Historical Heritage			
Are disturbance to terrestrial flora minimized (e.g. to be preserved)?			✓
Are disturbance to terrestrial fauna minimized (if rare species identified)?			✓
Any historical heritage exists on site? If yes, ensure appropriate measures taken to preserve it.			✓
Others (please specify)			
Resource Conservation			
Is water recycled wherever possible for dust suppression?	✓		
Is water pipe leakage and wastage prevented?	✓		

Inspection Items	Implemented		N/A
	Yes	No*	
Are diesel-powered equipment shut off while not in use to reduce excessive use?	✓		
Are energy conservation practices adopted?	✓		
Are metal or other alternatives used to minimize the use of timber?	✓		
Are materials stored in good condition to prevent deterioration and wastage (e.g. covered, separated)?	✓		
Are pesticides used under the requirement of Agriculture, Fishers and Conservation Department?	✓		
Others (please specify)			
Emergency Preparedness and Response			
Are fire extinguishers / fighting facilities properly maintained and not expired? Escape not blocked / obstructed?	✓		
Are accidents and incidents reported and reviewed, and corrective & preventive actions identified and recorded?	✓		
Others (please specify)			



Annexure- 28: Health and safety Checklist

Safety Checklist for Erection Work at Package 3

ELECTRICITY
POWER TRANSMISSION & DISTRIBUTION

APB PAB 3
29/02/2023
DATE 15/09/23

THIS CHECKLIST FOR THE WORK
Location No. 33/0

SL. NO.	DESCRIPTION	OBSERVATION		REMARKS
		YES	NO	
1	Whether proper anchoring is completed (উৎকর্ষ স্থাপন সম্পূর্ণ হয়েছে কিনা)	✓		
2	Is first and last assemblies are safe (প্রথম ও শেষের অসেম্বলি সুরক্ষিত আছে কিনা)	✓		
3	Whether proper bracing system is done and safe (ব্র্যাকিং সিস্টেম সঠিকভাবে করা হয়েছে কিনা)	✓		
4	Whether proper bracing system is done and safe (ব্র্যাকিং সিস্টেম সঠিকভাবে করা হয়েছে কিনা)	✓		
5	Whether proper bracing system is done and safe (ব্র্যাকিং সিস্টেম সঠিকভাবে করা হয়েছে কিনা)	✓		
6	Whether proper bracing system is done and safe (ব্র্যাকিং সিস্টেম সঠিকভাবে করা হয়েছে কিনা)	✓		
7	Whether proper bracing system is done and safe (ব্র্যাকিং সিস্টেম সঠিকভাবে করা হয়েছে কিনা)	✓		
8	Whether proper bracing system is done and safe (ব্র্যাকিং সিস্টেম সঠিকভাবে করা হয়েছে কিনা)	✓		
9	Whether proper bracing system is done and safe (ব্র্যাকিং সিস্টেম সঠিকভাবে করা হয়েছে কিনা)	✓		
10	Whether proper bracing system is done and safe (ব্র্যাকিং সিস্টেম সঠিকভাবে করা হয়েছে কিনা)	✓		
11	Whether proper bracing system is done and safe (ব্র্যাকিং সিস্টেম সঠিকভাবে করা হয়েছে কিনা)	✓		
12	Whether proper bracing system is done and safe (ব্র্যাকিং সিস্টেম সঠিকভাবে করা হয়েছে কিনা)	✓		
13	Whether proper bracing system is done and safe (ব্র্যাকিং সিস্টেম সঠিকভাবে করা হয়েছে কিনা)	✓		
14	Whether proper bracing system is done and safe (ব্র্যাকিং সিস্টেম সঠিকভাবে করা হয়েছে কিনা)	✓		
15	Whether proper bracing system is done and safe (ব্র্যাকিং সিস্টেম সঠিকভাবে করা হয়েছে কিনা)	✓		
16	Whether proper bracing system is done and safe (ব্র্যাকিং সিস্টেম সঠিকভাবে করা হয়েছে কিনা)	✓		
17	Whether proper bracing system is done and safe (ব্র্যাকিং সিস্টেম সঠিকভাবে করা হয়েছে কিনা)	✓		
18	Whether proper bracing system is done and safe (ব্র্যাকিং সিস্টেম সঠিকভাবে করা হয়েছে কিনা)	✓		
19	Whether proper bracing system is done and safe (ব্র্যাকিং সিস্টেম সঠিকভাবে করা হয়েছে কিনা)	✓		
20	Whether proper bracing system is done and safe (ব্র্যাকিং সিস্টেম সঠিকভাবে করা হয়েছে কিনা)	✓		
21	Whether proper bracing system is done and safe (ব্র্যাকিং সিস্টেম সঠিকভাবে করা হয়েছে কিনা)	✓		
22	Whether proper bracing system is done and safe (ব্র্যাকিং সিস্টেম সঠিকভাবে করা হয়েছে কিনা)	✓		
23	Whether proper bracing system is done and safe (ব্র্যাকিং সিস্টেম সঠিকভাবে করা হয়েছে কিনা)	✓		

Signature of Section Incharge/Site Engineer/Site Supervisor: *Riaz Hossain.*

Signature of EHSO/ENS Supervisor: *[Signature]*

Shot on Z60 plus

Pile Foundation Checklist Package 4

L&T Construction PFD, TL BU			
Name of Project: 220KV 132KV AOB-3		Date of inspection: 14/12/23	
Location number: 30/0 (220KV) 181			
Sl no.	Points to be checked	Status (Y/N/NO)	Corrective Action Status if N/A
1. Tripod (Before Piling & during Rig installation)			
1.1	Are the tripod legs are fastened properly? (ত্রিভুজ পা কি ত্রিকোণ ভাবে আঁকছে?)	Yes	
1.2	Are all the joints of range joint fitted properly and lubricated, with no slack (স্লেক) (স্লেক হওয়ায় সমস্ত জয়েন্ট কি সঠিকভাবে লাগানো এবং শাক করা হয়েছে, কোনো ফ্রিক্স নেই)?	Yes	
1.3	Is the condition of main hanger pin/bolt found ok and free from any defect or damage? (প্রধান হ্যাংগার পিন/বোল্টের অবস্থা কি ঠিক আছে এবং কোনো ত্রুটি বা ক্ষতি থেকে মুক্ত?)	Yes	
1.4	Is the wire rope used for hoisting of OMC skip, tremie pipe found free from all defects like bird cage, broken wire, kink etc./OAC পাইপ, ট্রেমি পাইপ উত্তোলনের জন্য ব্যবহৃত তারের পিটি কি bird cage, ভাঙা তার, কিক ইত্যাদি সমস্ত ত্রুটি থেকে মুক্ত পাওয়া যায়?)	Yes	
1.5	Is the hook latch installed on hook used for hanging the load? (হুকের উপর লাগানো হুক ল্যাচ কি সেখানে তুলানোর জন্য ব্যবহৃত হয়?)	-	lack missing
1.6	Are maximum of 4 no U clamps installed for splicing of wire rope? (সিঙ্গেল পিটি সংযুক্ত করার জন্য কি সর্বমাক্স ৪টি U clamp ইনস্টল করা দেয়?)	-	3 no U
1.7	Are the gap between all U clamps are equal? (সব U ক্ল্যাম্পের মধ্যে গ্যাপ কি সমান?)		Yes
1.8	Are the last portion of U clamp is towards free end of wire rope? (U ক্ল্যাম্পের শেষ অংশ কি তারের মুক্ত অংশের দিকে?)	Yes	
2. Winch Machine (During Pile operation)			
2.1	Are all rotating parts greased? (সব ঘুরানো অংশ গ্রেস করা?)	Yes	
2.2	Are 3 set of belts in use? (৩টি বেল্ট কি ব্যবহার করা হচ্ছে?)	Yes	
2.3	Is exhaust pipe available? (বিস্ফোরণ পাইপ উপলব্ধ?)	Yes	
2.4	Is condition of piston & shaft found ok? (পিস্টন ও শ্যাফটের অবস্থা কি ঠিক আছে?)	Yes	
2.5	Is condition of base shaft & drum shaft found ok? (বেস শ্যাফট ও ড্রাম শ্যাফটের অবস্থা কি ঠিক আছে?)	Yes	
3. Welding machine			
3.1	Is welding machine covered by metal sheet (মেশিন শীট দ্বারা আবৃত)? (মেশিন বাক?)		Old machine
3.2	Is body earth available for welding machine (ওয়েল্ডিং মেশিনের জন্য বডি আর্থিং)?	Yes	
3.3	Is welding cable with earth clamp used for return path (ওয়েল্ডিং ক্যাবলের জন্য আর্থ ক্ল্যাম্প সহ ওয়েল্ডিং ক্যাবল কি না)?	Yes	
3.4	Is the welding cable is free from any defect, joint & damage (ওয়েল্ডিং তার কোন ত্রুটি, জয়েন্ট বা ক্ষতি থেকে মুক্ত?)	Yes	
3.5	Is welder wearing leather apron, leather gloves & welder face shield? (ওয়েল্ডার কি লেদার এপ্রন, লেদার গ্লোভস এবং ওয়েল্ডার ফেস শিল্ড পরে?)	Yes	
4. Diesel generator			
4.1	Is body earth of DG installed? (ওয়েল্ডিং মেশিনের জন্য বডি আর্থিং কি ইনস্টল করা হয়েছে?)	Yes	
4.2	Is the DG operational test is observed? (ওয়েল্ডিং মেশিনের বাক কি আছে?)		NO
4.3	Is earth double core & double insulated cable used for electric power distribution? (বৈদ্যুতিক শক্তি বিতরণের জন্য কি ডাবল কোর ডাবল ইনসুলেটেড ক্যাবল ব্যবহার করা হয়?)	NO	
4.4	Is the electrical cable connection to the legs & nut & bolt? (বৈদ্যুতিক তারের সংযোগ কি লেগস এবং নট ও বোল্ট)?	NO	

4.3	Is the MCCB/ECCB available for power supply? (বিদ্যুৎ সরবরাহের জন্য কি MCCB/ECCB উপলব্ধ?)	Yes	
4.4	Are 3 no V belts used in DG (নিশ্চিত কি এটি 3 টি বেল্ট ব্যবহার করা হয়?)	2 no. As	
4.5	Is the rotating parts of DG guarded properly? (ডিজেল যন্ত্রসমূহের আবরণ কি সঠিকভাবে প্রযোজিত?)	Yes	
5. Boring/Drilling			
5.1	Are the system of double chain wrench wrapping system adopted for removing of DMC pipe after completion of boring. (কোয়িং শেষ হওয়ার পরে DMC পাইপ অপসারণের জন্য ডবল চেইন হ্যান্ড মোড়ানো সিস্টেমের ব্যবস্থা গ্রহণ করা হয়েছে?)	Yes	
5.2	Is the condition of stopper (staple) found ok without much opening? (স্টপার চ্যানেলের অবস্থা অনেক খোলা আছে কি না?)	Good	
6. Dewatering Pump			
6.1	Is rotating parts guarded properly? (চুর্ণিমাংশ সঠিকভাবে ঢাকা আছে কি না?)	NA	
7. Concrete Mixture Machine			
7.1	Are all rotating parts of machine guarded? (মেশিনের সমস্ত চুর্ণিমাংশ কি আবৃত?)	Yes	
7.2	Are all workmen involved for aggregate & cement pouring with nose mask? (সমস্ত কর্মীরা যারা সিমেন্ট এবং বালি সরবরাহ করছে তারা কি নাক মুখে মাস্ক দিয়ে কাজ করছে?)	Yes	
7.3	Is the person who will climb on hopper with full body harness? (যে ব্যক্তি কানেক্টর উপর আরোহণ করছে সে পূর্ণদৈর্ঘ্য হেল্মেট ব্যবহার করছে কি না?)	Yes	
<i>Rujat</i> <i>Rujat Hossain</i> Name & Signature of Supervisor or EHS Steward			

Safety Checklist for Erection Work Package 4

TRANSRAIL Transrail Lighting Limited		Safety Checklist for Erection work		Format No: TRANSRAIL/CONST./HSE/ER-CHKL/011 Rev. No: 00 Date: 01.04.2021	
Name of the Project: <u>Stepalgaon - Shuvcher</u>			Date of Inspection: <u>23-09-23</u>		
Loc. No. <u>14/10</u>			Classification and Type of tower <u>2DT6 + 3</u>		
Contractor: <u>Sayem fdo.</u>					
Sr. No.	Description	Observation	Remark		
1	Check whether Supervisor/Gang Leader had issued instruction to workers before start of work on that day.	✓ YES/NO/NA			
2	a) All workers are using PPE at site i.e. Safety Helmets, Safety Belts, Fall Arrestors, R-fall Arrestor, Safety Shoes, Binocular, Hand Gloves, R-Jackets etc. b) TLL officials are using PPEs at site. c) Check all workers working at height have locked their safety belts. d) Ensure workers are using mobile/horizontal fall arrestor while ascending / descending and working on tower. e) Check no distraction for the workmen while ascending / descending from the tower.	Safety Helmet-No. in use/total workers -- <u>14/14</u> Safety Belt-No in use/ total workers -- <u>14/14</u> Safety Shoe-No. in use/total workers -- <u>14/14</u> Hand Gloves-No. In use/total worker -- <u>14/14</u> ✓ YES/NO/NA ✓ YES/NO/NA ✓ YES/NO/NA ✓ YES/NO/NA			
3	Check that working underneath the tower is leveled properly.	✓ YES/NO/NA			
4	a) Check all lifting tools & tackles being used at the site have been tested for safe working load and having valid test certificates. (Copies of the test certificate are checked by the site HSE Person & other TLL staff before start of the work). b) Visual inspection of all T&P to be used at the site has been identified with identification No. and found to be in healthy condition.	Derrick Pole = <u>01</u> Pulleys (Open & Closed) = <u>8/08</u> Ropes/Slings (Wire Rope) = <u>10/06</u> PP Rope = <u>10</u> D Shackles and hooks = <u>15</u> Power Winch Machine = <u>01</u> Any Other tools =			
5	All nuts and bolts of the stub are fitted and reasonably tightened.	✓ YES/NO/NA			
6	All nuts and bolts and step bolts are fitted in tower and have been reasonably tightened before undertaking job of upper section of the tower.	✓ YES/NO/NA			
7	Ensure proper guying arrangement for leg & Derrick Pole.	✓ YES/NO/NA			
8	Ensure communication facility is available at the site.	✓ YES/NO/NA			
9	Ensure only erection team members are allowed to stand near the tower while erection is in progress.	✓ YES/NO/NA			

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 TRANSRAIL Transrail Lighting Limited		Safety Checklist for Erection work		Format No: TRANSRAIL/CONST./HSE/ER-CHKL/011 Rev. No: 00 Date: 01.04.2021	
10	a) Ensure for safety measures during tower erection near road/rail/river/adjoining power line. b) Name of senior officials from TLL who available at site.	YES/NO/NA			
11	Adequate warning to public nearby ensured.	YES/NO/NA			
12	First Aid box with required items available at site. Name & No. of First Aid trained workers. a) <u>N/A</u> b) <u>aman</u>	YES/NO/NA			
13	Action taken for violation of safety norms, if any.	YES/NO/NA			
14	Ensure the availability of Height Pass Cum ID card at location.	YES/NO/NA			
15	Ensure the Skill Matrix completed after HSE induction. (Only for new workers)	YES/NO/NA			
16	Ensure is any Child labour found at location during the work. (As per ID Proof)	YES/NO/NA			If Yes, then mark the name.
17	Ensure Safety awareness poster/banner displayed at location.	YES/NO/NA			
18	Any other point specific to location. (Mobile not to be use by workers (Fitter/Helper) during the height work.	YES/NO/NA			


Site Supervisor/Engg.

Date: 23/09/23


HSE Officer/Engg.


Project Manager

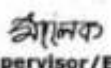
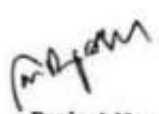
Note:

- Height work permit should be granted only if, the checklist for erection work is filled.
- Height Pass is mandatory for fitters who are engaged in the height work.
- Skill Matrix record is to be maintain after completing the HSE induction training of workmen. (Only for new joining subcontractor/gang workers)

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TRANSRAIL Transrail Lighting Limited		Safety Checklist for Erection work		Format No: TRANSRAIL/CONST./HSE/ER-CHKL/011 Rev. No: 00 Date: 01.04.2021	
Name of the Project: <u>230KV 670palegmi - Shuchor.</u>			Date of Inspection: <u>20.7.23</u>		
Loc. No. <u>9/6</u> Classification and Type of tower <u>2DL+4 smtr.</u>					
Contractor <u>Sayem Td.</u>					
Sr. No.	Description	Observation	Remark		
1	Check whether Supervisor/Gang Leader had issued instruction to workers before start of work on that day.	✓ YES/NO/NA			
2	a) All workers are using PPE at site i.e. Safety Helmets, Safety Belts, Fall Arrestors, R-fall Arrestor, Safety Shoes, Binocular, Hand Gloves, R-Jackets etc. b) TLL officials are using PPEs at site. c) Check all workers working at height have locked their safety belts. d) Ensure workers are using mobile/horizontal fall arrestor while ascending / descending and working on tower. e) Check no distraction for the workmen while ascending / descending from the tower.	Safety Helmet-No. in use/total workers -- <u>20/20</u> Safety Belt-No in use/ total workers -- <u>6/20</u> Safety Shoe-No. in use/total workers -- <u>20/20</u> Hand Gloves-No. in use/total worker -- <u>20/20</u> ✓ YES/NO/NA ✓ YES/NO/NA ✓ YES/NO/NA ✓ YES/NO/NA			
3	Check that working underneath the tower is leveled properly.	✓ YES/NO/NA			
4	a) Check all lifting tools & tackles being used at the site have been tested for safe working load and having valid test certificates. (Copies of the test certificate are checked by the site HSE Person & other TLL staff before start of the work). b) Visual inspection of all T&P to be used at the site has been identified with identification No. and found to be in healthy condition.	Derrick Pole = <u>0L</u> Pulleys (Open & Closed) = <u>85/15</u> Ropes/Slings (Wire Rope) = <u>85/12</u> PP Rope = <u>85</u> D Shackles and hooks = <u>10</u> Power Winch Machine = <u>0L</u> Any Other tools =			
5	All nuts and bolts of the stub are fitted and reasonably tightened.	✓ YES/NO/NA			
6	All nuts and bolts and step bolts are fitted in tower and have been reasonably tightened before undertaking job of upper section of the tower.	✓ YES/NO/NA			
7	Ensure proper guying arrangement for leg & Derrick Pole.	✓ YES/NO/NA			
8	Ensure communication facility is available at the site.	✓ YES/NO/NA			
9	Ensure only erection team members are allowed to stand near the tower while erection is in progress.	✓ YES/NO/NA			

 Transrail Lighting Limited		Safety Checklist for Erection work		Format No: TRANSRail/CONST./HSE/ER-CHKL/011 Rev. No: 00 Date: 01.04.2021	
10	a) Ensure for safety measures during tower erection near road/rail/river/adjoining power line. b) Name of senior officials from TLL who available at site.	✓ YES/NO/NA Name: <u>Abdul Mubin</u>			
11	Adequate warning to public nearby ensured.	✓ YES/NO/NA			
12	First Aid box with required items available at site. Name & No. of First Aid trained workers. a. <u>Abdullah</u> b. <u>Haleem</u> c. <u>Nasirul</u>	✓ YES/NO/NA			
13	Action taken for violation of safety norms, if any.	✓ YES/NO/NA			
14	Ensure the availability of Height Pass Cum ID card at location.	✓ YES/NO/NA			
15	Ensure the Skill Matrix completed after HSE induction. (Only for new workers)	✓ YES/NO/NA			
16	Ensure is any Child labour found at location during the work. (As per ID Proof)	YES/NO/NA ✓			If Yes, then mark the name.....
17	Ensure Safety awareness poster/banner displayed at location.	✓ YES/NO/NA			
18	Any other point specific to location. (Mobile not to be use by workers (Fitter/Helper) during the height work.	✓ YES/NO/NA			
 Site Supervisor/Engg.  HSE Officer/Engg.  Project Manager Date: <u>20/7/25</u> Note: - Height work permit should be granted only if, the checklist for erection work is filled. - Height Pass is mandatory for fitters who are engaged in the height work. - Skill Matrix record is to be maintain after completing the HSE induction training of workmen. (Only for new joining subcontractor/gang workers)					

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TRANSRAIL Transrail Lighting Limited		Safety Checklist for Erection work		Format No: TRANSRAIL/CONST./HSE/ER-CHKL/011 Rev. No: 00 Date: 01.04.2021	
Name of the Project: <u>Gopalganj - Shunder</u>			Date of Inspection: <u>06/09/23</u>		
Loc. No. <u>1/2</u> Classification and Type of tower <u>RDL+1.5</u>					
Contractor <u>Saycon Tr.</u>					
Sr. No.	Description	Observation	Remark		
1	Check whether Supervisor/Gang Leader had issued instruction to workers before start of work on that day.	YES/NO/NA			
2	a) All workers are using PPE at site i.e. Safety Helmets, Safety Belts, Fall Arrestors, R-fall Arrestor, Safety Shoes, Binocular, Hand Gloves, R-Jackets etc. b) TLL officials are using PPEs at site. c) Check all workers working at height have locked their safety belts. d) Ensure workers are using mobile/horizontal fall arrestor while ascending / descending and working on tower. e) Check no distraction for the workmen while ascending / descending from the tower.	Safety Helmet-No. in use/total workers -- <u>15/15</u> Safety Belt-No in use/ total workers -- <u>05/15</u> Safety Shoe-No. in use/total workers -- <u>15/15</u> Hand Gloves-No. in use/total worker <u>15/15</u> ✓ YES/NO/NA ✓ YES/NO/NA ✓ YES/NO/NA ✓ YES/NO/NA			
3	Check that working underneath the tower is leveled properly.	✓ YES/NO/NA			
4	a) Check all lifting tools & tackles being used at the site have been tested for safe working load and having valid test certificates. (Copies of the test certificate are checked by the site HSE Person & other TLL staff before start of the work). b) Visual inspection of all T&P to be used at the site has been identified with Identification No. and found to be in healthy condition.	Derrick Pole = <u>01</u> Pulleys (Open & Closed) = <u>48/06</u> Ropes/Slings (Wire Rope) = <u>76/06</u> PP Rope = <u>16</u> D Shackles and hooks = <u>15</u> Power Winch Machine = <u>01</u> Any Other tools =			
5	All nuts and bolts of the stub are fitted and reasonably tightened.	✓ YES/NO/NA			
6	All nuts and bolts and step bolts are fitted in tower and have been reasonably tightened before undertaking job of upper section of the tower.	✓ YES/NO/NA			
7	Ensure proper guying arrangement for leg & Derrick Pole.	✓ YES/NO/NA			
8	Ensure communication facility is available at the site.	✓ YES/NO/NA			
9	Ensure only erection team members are allowed to stand near the tower while erection is in progress.	✓ YES/NO/NA			

 TRANSRAIL Transrail Lighting Limited		Safety Checklist for Erection work		Format No: TRANSRAIL/CONST./HSE/ER-CHKL/011 Rev. No: 00 Date: 01.04.2021	
10	a) Ensure for safety measures during tower erection near road/rail/river/adjoining power line. b) Name of senior officials from TLL who available at site.	YES/NO/NA			
11	Adequate warning to public nearby ensured.	YES/NO/NA			
12	First Aid box with required items available at site. Name & No. of First Aid trained workers. a. <u>Nader</u> b. <u>Emam</u> <u>alam</u>	YES/NO/NA			
13	Action taken for violation of safety norms, if any.	YES/NO/NA			
14	Ensure the availability of Height Pass Cum ID card at location.	YES/NO/NA			
15	Ensure the Skill Matrix completed after HSE induction. (Only for new workers)	YES/NO/NA			
16	Ensure is any Child labour found at location during the work. (As per ID Proof)	YES/NO/NA			If Yes, then mark the name
17	Ensure Safety awareness poster/banner displayed at location.	YES/NO/NA			
18	Any other point specific to location. (Mobile not to be use by workers (Fitter/Helper) during the height work.	YES/NO/NA			


Site Supervisor/Engg.
Date: 06/09/23


HSE Officer/Engg.


Project Manager

Note:

- Height work permit should be granted only if, the checklist for erection work is filled.
- Height Pass is mandatory for fitters who are engaged in the height work.
- Skill Matrix record is to be maintain after completing the HSE induction training of workmen. (Only for new joining subcontractor/gang workers)

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 TRANSRAIL Transrail Lighting Limited		Safety Checklist for Erection work		Format No: TRANSRAIL/CONST./HSE/ER-CHKL/011 Rev. No: 00 Date: 01.04.2021
Date of Inspection: <u>25.7.22</u>				
Name of the Project: <u>A.D.B project C scope-D</u>				
Loc. No. <u>15/0</u> Classification and Type of tower <u>2 D57.0 mtr.</u>				
Contractor <u>Mafi Erectors</u>				
Sr. No.	Description	Observation	Remark	
1	Check whether Supervisor/Gang Leader had issued instruction to workers before start of work on that day.	YES/NO/NA		
2	a) All workers are using PPE at site i.e. Safety Helmets, Safety Belts, Fall Arrestors, R-fall Arrestor, Safety Shoes, Binocular, Hand Gloves, R-Jackets etc. b) TLL officials are using PPEs at site. c) Check all workers working at height have locked their safety belts. d) Ensure workers are using mobile/horizontal fall arrestor while ascending / descending and working on tower. e) Check no distraction for the workmen while ascending / descending from the tower.	Safety Helmet-No. in use/total workers -- <u>19/19</u> Safety Belt-No in use/ total workers -- <u>06/19</u> Safety Shoe-No. in use/total workers -- <u>19/19</u> Hand Gloves-No. in use/total worker <u>19/19</u> YES/NO/NA YES/NO/NA YES/NO/NA YES/NO/NA		
3	Check that working underneath the tower is leveled properly.	YES/NO/NA		
4	a) Check all lifting tools & tackles being used at the site have been tested for safe working load and having valid test certificates. (Copies of the test certificate are checked by the site HSE Person & other TLL staff before start of the work). b) Visual inspection of all T&P to be used at the site has been identified with identification No. and found to be in healthy condition.	Derrick Pole = <u>03</u> Pulleys (Open & Closed) = <u>38</u> Ropes/Slings (Wire Rope) = <u>05</u> PP Rope = <u>10</u> D Shackles and hooks = <u>28</u> Power Winch Machine = <u>01</u> Any Other tools =		
5	All nuts and bolts of the stub are fitted and reasonably tightened.	YES/NO/NA		
6	All nuts and bolts and step bolts are fitted in tower and have been reasonably tightened before undertaking job of upper section of the tower.	YES/NO/NA		
7	Ensure proper guying arrangement for leg & Derrick Pole.	YES/NO/NA		
8	Ensure communication facility is available at the site.	YES/NO/NA		
9	Ensure only erection team members are allowed to stand near the tower while erection is in progress.	YES/NO/NA		

 TRANSRAIL Transrail Lighting Limited	Safety Checklist for Erection work	Format No: TRANSRAIL/CONST./HSE/ER-CHKL/011 Rev. No: 00 Date: 01.04.2021
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10	a) Ensure for safety measures during tower erection near road/rail/river/adjoining power line. b) Name of senior officials from TLL who available at site.	YES/NO/NA Name: <u>MD. NADIM</u>	
11	Adequate warning to public nearby ensured.	YES/NO/NA	
12	First Aid box with required items available at site. Name & No. of First Aid trained workers. a. <u>Sahidul</u> b. <u>Rabi</u> c. <u>Rezaul</u>	YES/NO/NA	
13	Action taken for violation of safety norms, if any.	YES/NO/NA	
14	Ensure the availability of Height Pass Cum ID card at location.	YES/NO/NA	
15	Ensure the Skill Matrix completed after HSE induction. (Only for new workers)	YES/NO/NA	
16	Ensure is any Child labour found at location during the work. (As per ID Proof)	YES/NO/NA	If Yes, then mark the name.....
17	Ensure Safety awareness poster/banner displayed at location.	YES/NO/NA	
18	Any other point specific to location. (Mobile not to be use by workers (Fitter/Helper) during the height work.	YES/NO/NA	

বাহিন
Site Supervisor/Engg.

Date: 03.7.23

Jual
HSE Officer/Engg.

for Pankaj Kumar
Project Manager

Note: ০৩.৭.২৩

1. Height work permit should be granted only if, the checklist for erection work is filled.
2. Height Pass is mandatory for fitters who are engaged in the height work.
3. Skill Matrix record is to be maintain after completing the HSE induction training of workmen. (Only for new joining subcontractor/gang workers)

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Pile Foundation Checklist Package 4

 TRANSRAIL Transrail Lighting Ltd.	PILE FOUNDATION SAFETY CHECKLIST	Format No. TRANSRAIL/CONST/HSE/PFS-CHKL/021 Rev. No: 01 Date: 01.04.2021
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1. To be filled up by the Site Supervisor /HSE Person (Piling Operation)

Name of the Project: ADB Bangladesh. Date of Inspection: 14.12.25

Name of the pile drivers: md. sojan. Loc No.- 16/1

Name of Contractor: FU Construction. Pile machine number: 01

Type of machine: Normal / Rig / Tripod ☒

2. Check Points before Piling

Sl. No	Description	Yes / No / NA
1.	Whether pile SOP / manual available at location?	☒ Yes / No / NA
2.	To Check the underground utilities like, gas pipe lines and electrical cable line is essential.	☒ Yes / No / NA
3.	Is there any obstacles from ground surface, if yes then remove.	☒ Yes / No / NA
4.	To Ensure all pile driving equipments, const. design properly maintain or not.	☒ Yes / No / NA
5.	Whether required warning signages are displayed at site or not?	☒ Yes / No / NA
6.	To Ensure the hard Barrication with appropriate fencing, to prevent on lookers and unauthorized person trespassing into the work site.	☒ Yes / No / NA
7.	To Ensure the proper lux illumination, especially at night work	Yes / No / ☒ NA
8.	To Ensure the proper arrangement of stacking of mud / slurry at location.	☒ Yes / No / NA
9.	To Ensure the pile drive must be handled by the competent person.	☒ Yes / No / NA
10.	To Ensure lifting hook should be properly welded or not?	☒ Yes / No / NA
11.	To Ensure Exposed gears, flywheels, belts etc. is being guarded or not?	☒ Yes / No / NA
12.	To Ensure third party testing done or not by the competent person.	☒ Yes / No / NA
13.	Whether Bentonite MSDS is available at site or not?	Yes / No / ☒ NA
14.	To Ensure the proper PPEs like nose mask, goggles, gum boots, rubber hand gloves for mixing and handling the bentonite.	☒ Yes / No / NA
15.	To ensure whether whistle, siren, horn or other effective signaling equipment with pile drivers available or not?	☒ Yes / No / NA
16.	To Ensure the Emergency Equipments available at site or not?	☒ Yes / No / NA


Site Engg./Supervisor


HSE Officer

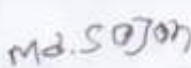

Section/Project I/C

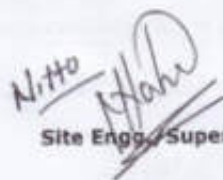
 TRANSRAIL Transrail Lighting Ltd.	PILE FOUNDATION SAFETY CHECKLIST	Format No. TRANSRAIL/CONST/HSE/PFS-CHKL/021 Rev. No: 01 Date: 01.04.2021
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Visual Inspection Check Points – To be checked & filled by machine operator along with site Engineer/Supervisor & HSE Persons.

Yes	NO	Pile Machine Cabin
☒		Cleanliness
☒		Door operational
☒		Deadman Pedal / Switch operational
		Handrails and ladders fitted and secure
		Seat adjustments operational secure with seat belt
		Warning devices and other lights (flashing, head, tail, etc) are appropriate for the environment in which plant is being used. (check environment noise criteria particularly if working out of hours)
Yes	NO	Slew and Winch
☒		Slew ring bolts fitted/ tightened properly
	☒	Oil leaks from hydraulic and gear box
	☒	Test winch break on drum
	☒	Check winches for leaks and damage and mounting bolts
	☒	Limit switch on rope travel
	☒	Does the pawl break function
	☒	Brake operational
	☒	Drivers free from leaks
Yes	NO	Environmental
☒		Clean, free of organic materials (mud, dirt, weeds, or seeds) prior to arrival
	☒	Engine baffling or noise reduction equipment fitted as per manufacturers specifications
	☒	Smoke from internal combustion engines should not be visible for more than ten seconds
	☒	Bentonite mud carried out ship tank
	☒	Lubricant oil and other things don't drop the water.
	☒	Noise level & emission
Yes	NO	Drill Head
	☒	Guarding installed
	☒	Hydraulics
	☒	Anchor points fitted for fall restraint systems
	☒	Slides and feed rails not damaged and all bolts, pins/ retainers fitted

Yes	NO	Over the water
		Proper locking of crawler crane
		Crane barricading
		Ship edge fencing
		Life jacket & lifebuoy
		Train Diving & First Aider
		Speed Boat / Motor Boat
		Emergency Numbers display
Yes	NO	Mast Mountings
		Bolts, pins and retainers
		Rigging, fittings, sheaves & slings have Manufacture's ID / Working Load Limit (WLL) attached or supply certificates
		Wire line, pulleys, guides, steel cable free from damage and wear
		Anti 2 block on service line (Auxiliary line)
		Sliding pad wear condition
		Damage, cracks in mounting plates
		Boom angle indicator
Yes	NO	Other
		Drill mode not allowing the operator to leave the seat with drill head turning
		Transport mode allowing the operator to leave the seat and motor runs
		Job section pins and retainers
		Warning Signs - Danger Beware Overhead Wires & Underground Services
Yes	NO	Undercarriage
		Tracks complete and undamaged
		Idlers / Rollers
		Drivers free from leaks
		Track Adjuster Sprockets
Yes	NO	Hydraulic System & Engine
		Rams / Hoses / Connector
		Pins / Mounting & hydraulic isolator
		Engine or Exhaust guarded
		Air cleaner system & Battery condition


Operator


Site Engg./Supervisor


HSE Officer

 TRANSRAIL Transrail Lighting Ltd.	PILE FOUNDATION SAFETY CHECKLIST	Format No. TRANSRAIL/CONST/HSE/PFS-CHKL/021 Rev. No: 01 Date: 01.04.2021
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To be filled up by the Site Supervisor /HSE Person (Piling Operation)

Name of the Project: ADB - Bangladesh - B Date of Inspection: 25.12.23

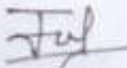
Name of the pile drivers: Deller. Md. Loc. No. - 12/0

Name of Contractor: REC Engineering / Const. Pile machine number:

Type of machine: Normal / Rig / Tripod

2. Check Points before Piling

Sl. No	Description	Yes / No / NA
1.	Whether pile SOP / manual available at location?	<u>Yes</u> / No / NA
2.	To Check the underground utilities like, gas pipe lines and electrical cable line is essential.	<u>Yes</u> / No / NA
3.	Is there any obstacles from ground surface, if yes then remove.	<u>Yes</u> / No / NA
4.	To Ensure all pile driving equipments, const. design properly maintain or not.	<u>Yes</u> / No / NA
5.	Whether required warning signages are displayed at site or not?	<u>Yes</u> / No / NA
6.	To Ensure the hard Barrication with appropriate fencing, to prevent on lookers and unauthorized person trespassing into the work site.	<u>Yes</u> / No / NA
7.	To Ensure the proper lux illumination, especially at night work	<u>Yes</u> / No / NA
8.	To Ensure the proper arrangement of stacking of mud / slurry at location.	<u>Yes</u> / No / NA
9.	To Ensure the pile drive must be handled by the competent person.	<u>Yes</u> / No / NA
10.	To Ensure lifting hook should be properly welded or not?	<u>Yes</u> / No / NA
11.	To Ensure Exposed gears, flywheels, belts etc. is being guarded or not?	<u>Yes</u> / No / NA
12.	To Ensure third party testing done or not by the competent person.	<u>Yes</u> / No / NA
13.	Whether Bentonite MSDS is available at site or not?	<u>Yes</u> / No / NA
14.	To Ensure the proper PPEs like nose mask, goggles, gum boots, rubber hand gloves for mixing and handling the bentonite.	<u>Yes</u> / No / NA
15.	To ensure whether whistle, siren, horn or other effective signaling equipment with pile drivers available or not?	<u>Yes</u> / No / NA
16.	To Ensure the Emergency Equipments available at site or not?	<u>Yes</u> / No / NA


Site Engg./Supervisor


HSE Officer

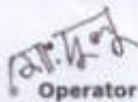

Section/Project I/C

 TRANSRAIL Transrail Lighting Ltd.	PILE FOUNDATION SAFETY CHECKLIST	Format No. TRANSRAIL/CONST/HSE/PFS-CHKL/021 Rev. No: 01 Date: 01.04.2021
--	---	---

Visual Inspection Check Points – To be checked & filled by machine operator along with site Engineer/Supervisor & HSE Persons.

Yes	NO	Pile Machine Cabin
		Cleanliness
		Door operational
		Deadman Pedal /Switch operational
		Handrails and ladders fitted and secure
		Seat adjustments operational secure with seat belt
		Warning devices and other lights (flashing, head, tail, etc) are appropriate for the environment in which plant is being used. (check environment noise criteria particularly if working out of hours)
Yes	NO	Slew and Winch
✓		Slew ring bolts fitted/ tightened properly
	✓	Oil leaks from hydraulic and gear box
✓		Test winch break on drum
	✓	Check winches for leaks and damage and mounting bolts
✓		Limit switch on rope travel
✓		Does the pawl break function
✓		Brake operational
✓		Drivers free from leaks
Yes	NO	Environmental
✓		Clean, free of organic materials (mud, dirt, weeds, or seeds) prior to arrival
✓		Engine baffling or noise reduction equipment fitted as per manufacturers specifications
✓		Smoke from internal combustion engines should not be visible for more than ten seconds
✓		Bentonite mud carried out ship tank.
✓		Lubricant oil and other things don't drop the water.
✓		Noise level & emission
Yes	NO	Drill Head
✓		Guarding installed
✓		Hydraulics
✓		Anchor points fitted for fall restraint systems
✓		Slides and feed rails not damaged and all bolts, pins/ retainers fitted

Yes	NO	Over the water
		Proper locking of crawler crane
		Crane barricading
		Ship edge fencing
		Life jacket & lifebuoy
		Train Diving & First Aider
		Speed Boat / Motor Boat
		Emergency Numbers display
Yes	NO	Mast Mountings
		Bolts, pins and retainers
		Rigging, fittings, sheaves & slings have Manufacture's ID / Working Load Limit (WLL) attached or supply certificates
		Wire line, pulleys, guides, steel cable free from damage and wear
		Art 2 block on service line (Auxiliary line)
		Sliding pad wear condition
		Damage, cracks in mounting plates
		Boom angle indicator
Yes	NO	Other
		Drill mode not allowing the operator to leave the seat with drill head turning
		Transport mode allowing the operator to leave the seat and motor runs
		Jib section pins and retainers
		Warning Signs - Danger Beware Overhead Wires & Underground Services
Yes	NO	Undercarriage
		Tracks complete and undamaged
		Idlers / Rollers
		Drivers free from leaks
		Track Adjuster Sprockets.
Yes	NO	Hydraulic System & Engine
		Rams / Hoses / Connector
		Pins / Mounting & hydraulic isolator
		Engine or Exhaust guarded
		Air cleaner system & Battery condition


Operator


Site Engg./Supervisor


HSE Officer

Annexure-29: Environmental Management Implementation Schedule (January - June 2024)

Environmental Issues/Parameters	Monitoring Parameters	Standards/Guidelines	Means of Monitoring	Frequency	Location
Requirement of land	Ensure that PAPs get compensation as per RP	As per RP	Inspection	As per RP	RoW of the package 3 and 4
Trimming of trees clearing vegetation	Checking whether proper compensation as mentioned in RP is received by PAPs.	DoE/FD	Inspection	Regular during tree felling and site clearing operations	RoW of the package 3 and 4
Ambient Air Quality Parameters	SPM, PM10, PM2.5, SOx, NOx, CO & Pb- 24hr monitoring	DoE standards	Monitoring report analysis	Before construction	At representative tower construction sites
Noise Pollution	Ambient noise level	DoE standards	Monitoring report analysis	Regularly during construction	At adjacent subproject cultural sites and construction camps
Pollution due to Wastes	Checking storage, transportation, handling, and disposal of wastes.	DoE guidelines	Inspection	Regular	Construction sites and camps of Package 3 and 4
Surface Water Quality	pH, BOD5, COD, NH3-N, PO4, TPH and coliforms	DoE Standards	Monitoring report analysis	At all river crossings and within 500m of waterbodies	River Crossing Sites near towers
Groundwater /Drinking Water Quality	pH, Mn, Fe, As, TC, FC, TPH	DoE Standards	Monitoring report analysis	Quarterly at all tube wells within 500m	At representative tower construction sites
Traffic congestion/ Road Accident	Checking road crossing points, roads adjacent to towers.	BRTA	Inspection	Regular	At road/railway. crossing points and roads adjacent to towers
Occupational health and safety	Use of PPE, general health, water supply and sanitation.	DoE/IFC guidelines	Inspection	Regular	At construction sites and camps
Community health and safety	Awareness of local people.	DoE/IFC guidelines	Inspection	Regular	At tower construction sites and crossing of roads

Annexure-30: PPE Inventories

Package 3

SL	MRN MATERIAL DESC	UOM DESC	RECEIVED QTY
1	MEGA PHONE; TYPE :- SHOULDER; MAKE :- Ahuja; MODEL :- AM-20H PA ;	Numbers	5.0
2	ANEMOMETER; TYPE :- DIGITAL; MAKE :- EXTECH; MODEL :- AN300;	Numbers	5.0
3	KITTO CLAMP; MOC :- MS; DIA :- 12 - 14 MM;	Numbers	10.0
4	SAFETY SHOES; APPLICATION :- For staff; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 6; Electrical grade;	Pairs	10.0
5	SAFETY SHOES; APPLICATION :- For staff; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 8; Electrical grade;	Pairs	10.0
6	SAFETY SHOES; APPLICATION :- For staff; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 9; Electrical grade;	Pairs	8.0
7	SAFETY SHOES; APPLICATION :- For staff; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 10; Electrical grade;	Pairs	2.0
8	GUM BOOTS; MATERIAL :- PVC; PATTERN :- With steel toe; SIZE :- 7 (full length);	Pairs	144.0
9	ROCK CHAIR; MATERIAL :- Nylon Polyester; SIZE :- Width - 44 mm; Capacity - 23kN;	Numbers	8.0
10	GUM BOOTS; MATERIAL :- PVC; PATTERN :- With steel toe; SIZE :- 8 (full length);	Pairs	91.0
11	GUM BOOTS; MATERIAL :- PVC; PATTERN :- With steel toe; SIZE :- 9 (full length);	Pairs	59.0
12	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Ratchet; COLOUR :- White; With chin strap; with embossed L&T Logo	Numbers	20.0
13	SAFETY SHOES; APPLICATION :- For workmen; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With steel toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 7; Electrical grade;	Pairs	130.0
14	ROPE GRAB FALL ARRESTER; SIZE :- 50 m long anchorage lifeline;	Numbers	25.0
15	SAFETY SHOES; APPLICATION :- For workmen; MATERIAL :- Leather; TYPE :- Male; PATTERN :- With	Pairs	70.0

SL	MRN MATERIAL DESC	UOM DESC	RECEIVED QTY
	steel toe; TYPE OF SOLE :- Direct injected PVC sole; SIZE :- 6; Electrical grade;		
16	SHOULDER PAD; MATERIAL :- Leather;	Numbers	336.0
17	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Nape; COLOUR :- Yellow; OTHER SPECIFICATIONS :- With chin strap;	Numbers	520.0
18	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Ratchet; COLOUR :- Blue; OTHER SPECIFICATIONS :- With chin strap;	Numbers	25.0
19	LEATHER HAND GLOVES; APPLICATION :- Welding work; SIZE :- 14 long; OTHER SPECIFICATIONS :- With inside cotton lining;	Pairs	14.0
20	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Nape; COLOUR :- Yellow; With chin strap; with embossed L&T Logo	Numbers	150.0
21	ROPE GRAB FALL ARRESTER; CE certified conforming to EN 353 – 2 – 1993 made of mild steel with galvanized coating / stainless steel Gravity locking mechanism 14 mm opening;	Numbers	130.0
22	RETRACTABLE FALL ARRESTER BLOCK; LENGTH :- 15 m; CE certified and conforming to EN 360:2002 casing made up of high impact strength polymer comes with galvanized steel wire rope of dia. 4.5mm; provided with swivel snap hook anchorage eye with swivel action;	Numbers	11.0
23	SAFETY HELMET REFILL; TYPE :- Ratchet; OTHER SPECIFICATIONS :- With nylon chin strap;	Numbers	50.0
24	APRON; APPLICATION :- Welding work; MATERIAL :- Leather; OTHER SPECIFICATIONS :- With full sleeves;	Numbers	14.0
25	SAFETY SHOES; APPLICATION :- For workmen; MATERIAL :- PVC; PATTERN :- With steel toe; TYPE OF SOLE :- Direct injected PVC sole; SIZE :- 8;	Pairs	30.0
26	REFLECTIVE JACKET; MATERIAL :- Polyester (80 GSM); COLOUR :- Orange; Reflective tape: micro prismatic reflective tapes 5 cm. wide total length-260 cm. reflective L&T logo with L&T LIFE & TRAFIC MARSHALL logo at front and back opening type: front	Sets	970.0
27	SAFETY SHOES; APPLICATION :- For workmen; MATERIAL :- PVC; PATTERN :- With steel toe; TYPE OF SOLE :- Direct injected PVC sole; SIZE :- 9;	Pairs	42.0
28	FULL BODY SAFETY HARNESS; MATERIAL :- Nylon; WITH DOUBLE LANYARD SCAFFOLDING HOOK TYPE WITH SHOCK ABSORBER WITH TOOLKIT;	Sets	158.0
29	SAFETY SHOES; APPLICATION :- For staff; MATERIAL :- PU; PATTERN :- With steel toe; TYPE OF	Pairs	5.0

SL	MRN MATERIAL DESC	UOM DESC	RECEIVED QTY
	SOLE :- Direct injected single density polyurethane sole; SIZE :- 6;		
30	ANCHORAGE LINE; MATERIAL :- POLYAMIDE ROPE; LENGTH :- 66 m; SIZE :- 14 mm DIA;	Numbers	36.0
31	SAFETY HELMET; MATERIAL :- PVC; TYPE :- Load carrying; COLOUR :- Yellow; With chin strap	Numbers	100.0
32	REFLECTIVE JACKET; MATERIAL :- Polyester (130 GSM); COLOUR :- Green; 3M Glass Bead reflective tape: 5 cm wide Total length -232 cm reflective L&T logo at front and back. opening type: front vest with 2-3 large Velcro;	Sets	275.0
33	COTTON HAND GLOVES; GRADE :- Grade I; SIZE :- 10 long; WEIGHT :- 80; With latex coating on one side;	Pairs	3650.0
34	RUBBER HAND GLOVES; APPLICATION :- Electrical work; GRADE :- 33 kV; SIZE :- 14 long; Acid/alkali proof;	Pairs	10.0
35	NOSE MASK; MATERIAL :- Cotton; TYPE :- Reusable;	Numbers	350.0
36	SAFETY SHOES; MATERIAL :- PU; TYPE :- Male; PATTERN :- With fibre toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 8; Electrical grade;	Pairs	50.0
37	SAFETY SHOES; MATERIAL :- PU; TYPE :- Male; PATTERN :- With fibre toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 5; Electrical grade;	Pairs	25.0
38	SAFETY SHOES; MATERIAL :- PU; TYPE :- Male; PATTERN :- With fibre toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 6; Electrical grade;	Pairs	50.0
39	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Nape; COLOUR :- Green; With chin strap;	Numbers	10.0
40	RETRACTABLE FALL ARRESTER BLOCK; MATERIAL :- Polymer; LENGTH :- 15 m;	Numbers	1.0
41	REFLECTIVE JACKET; MATERIAL :- Polyester (80 GSM); COLOUR :- Orange Red; SIZE :- Medium (M); With full sleeves;	Numbers	50.0
42	SAFETY SHOES; MATERIAL :- PU; TYPE :- Male; PATTERN :- With fibre toe; TYPE OF SOLE :- Polyurethane sole; SIZE :- 9; Electrical grade;	Pairs	50.0
43	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Nape; COLOUR :- Red; With chin strap;	Numbers	100.0
44	SAFETY HELMET; MATERIAL :- HDPE; TYPE :- Nape; COLOUR :- Red; With chin strap;	Numbers	10.0
45	SURGICAL ITEMS; Reusable Washable Rubber Gloves	Pairs	20.0
46	MEDICINES SNAKE BITE MEDICINE KIT	Numbers	5.0

SL	MRN MATERIAL DESC	UOM DESC	RECEIVED QTY
47	FIRE EXTINGUISHER ABC TYPE; CAPACITY :- 4 kg;	Numbers	8.0
48	FIRE BUCKETS; CAPACITY :- 9 L; NUMBERS :- 3; OTHER SPECIFICATIONS :- With Stand & Canopy;	Numbers	4.0
49	MEDICINES; HAND SANITIZER REFIFIL 5 LTR	Numbers	2.0
50	CO2 GAS TYPE FIRE EXTINGUISHER; CAPACITY :- 5 kg; OTHER SPECIFICATIONS :- Wall mounted With stand;	Numbers	6.0
51	CO2 GAS TYPE FIRE EXTINGUISHER; TYPE :- CO2; CAPACITY :- 6.5 kg; OTHER SPECIFICATIONS :- Wall mounted;	Numbers	8.0
52	FIRE BUCKET STAND; TYPE :- T type;	Numbers	4.0
54	SAFETY BARRICADE TAPE; MATERIAL :- LDPE; TYPE :- Reflective; COLOUR :- Red & white stripes; WIDTH :- 75 mm; THICKNESS :- 50 microns; OTHER SPECIFICATIONS :- 500 m roll;	Numbers	12.0
55	TESTER; TYPE :- Helmet mountable induction type;	Numbers	6.0
56	Safety Mannequin ; TYPE :- FULL BODY; OTHER SPECIFICATIONS :- With park;	Numbers	1.0
57	SAFETY BARRICADE TAPE; MATERIAL :- LDPE; TYPE :- Reflective; COLOUR :- Red & white stripes; WIDTH :- 75 mm; THICKNESS :- 50 microns; OTHER SPECIFICATIONS :- 500 m roll;	Numbers	80.0
58	DISCHARGE ROD; TYPE :- Telescopic; DISCHARGE VOLTAGE :- 33 kV; WIRE SIZE :- 10 mm ² ; WIRE LENGTH :- 15 m;	Numbers	30.0
59	TESTER; TYPE :- Helmet mountable induction type;	Numbers	15.0
60	TESTER; TYPE :- Pen Type;	Numbers	13.0
61	DISCHARGE ROD; TYPE :- Telescopic; DISCHARGE VOLTAGE :- 11 kV; WIRE SIZE :- 10 mm ² ; WIRE LENGTH :- 13 m;	Numbers	30.0
63	TRAFFIC SAFETY CONE; MATERIAL :- LLDPE; SIZE :- 750 mm height; With heavy rubber base;	Numbers	30.0
64	TOOL LIFTING BAG; 25 kg;	Numbers	150.0
65	STRETCHER; TYPE :- canvas cover wooden spine support;	Numbers	5.0
66	SAFETY BARRICADE TAPE; MATERIAL :- PVC; TYPE :- Reflective; COLOUR :- Red & white stripes; WIDTH :- 3 ; THICKNESS :- 100 microns;	Numbers	100.0
67	TRAFFIC SAFETY CONE; MATERIAL :- LLDPE; SIZE :- 750 mm height; With heavy rubber base;	Numbers	8.0

SL	MRN MATERIAL DESC	UOM DESC	RECEIVED QTY
68	MEDICAL EQUIPMENT AS DESCRIBED FURTHER; Ambu Bag	Numbers	10.0
69	EARTH ROD DRIVING SPIKE; MATERIAL :- GI; SUITABLE FOR :- 16 mm dia. rod;	Numbers	30.0
70	BINOCULAR; MAKE :- Bushnell; MODEL :- 131250;	Numbers	5.0

Package 4

t.

Team wise PPE at Site

Design, supply, Installation, testing & Commissioning OF 230KV & 132KV

Scope-A&E

NO WORK

Scope-B

Team	Manpower	Safety Helmet	Apron	Gumboots	Hand Gloves	Remark
Team, Sky Land	9	10	10	11	10	PPE Scope of Sub-contractor
Team, FU Engg	12	14	12	13	15	
Team, Rec Engg	13	15	16	16	15	
Team, Noor Tdr	10	10	12	10	14	

Scope-D

Team-1, Rumaisa ent	12	13	14	13	17	
Team-2, seen engg	14	15	16	15	20	
Team-3, Lamia engg	12	13	18	13	24	
Team-4, hassim	10	11	12	14	10	

Scope-F

Team-1, Rabeya Ent	25	31	29	26	29	
Team-2, noor tdr	55	58	59	55	60	
Team-3, denizen international	11	11	12	12	15	
Team-4, abdullah noman ent	10	10	11	15	20	



PPE Available at Store

Design, supply, installation, testing & Commissioning OF 230KV & 132KV

Store	Manpower	Safety Helmet	Safety shoes	Apron	Barrication tap	Hand Gloves
Scope-A&E	4	25	15	15	7	50
Scope-B	4	30	15	30	10	30
Scope-D	2	15	10	14	5	20
Scope-F	4	16	10	16	7	25



Annexure-31: Incident Register

ACCIDENT / INCIDENT / FIRST AID Register (A08-3)

INCIDENT TYPE	DATE and Location	Cause of the Incident	Person name Age / Design	Required Actions	Reported by
Illness	14/8/23 SRTL (20/1)	V-Fever	Alamgir 26 Helper	Stop work take rest One day Rest	Imrul Kabir
Illness	21/10/2023 SRTL (2/1)	Fever	Yasir Ali 30 Helper	medication and One day Rest	Rumana

Annexure-32: TBT Participant List

Package 3

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POWER TRANSMISSION & DISTRIBUTION IC

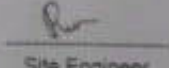
Issue 2-Rev 00
Ref: IM-8.1.2.2-A

PEP TALK REPORT AND ATTENDANCE SHEET

Name of the Project : ADB-3
Location : 7/10, SRTL
Name of the Section In-charge : Rajak D.
Name of the EHSO : Anoop M
Name of the Sub-Contractor/Dept: Raihan Enterprise
Number of workmen present : 14
Date & Time : 01/07/23
Topics discussed : Piling works: use of Harness during works and Safety Cardinal Rules etc

Response of workmen : good

Remark / Any significant problem identified: NO

Signature:  Site Engineer  EHSO

(P.T.O)
Page 1 of 2

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POWER TRANSMISSION & DISTRIBUTION IC**

Issue 2-Rev 00

ATTENDANCE SHEET FOR PEP-TALK

Name of the Project: **ADD-3**
 Job Code: **LE2IM2C1**
 Date: **04/5/23**
 Location: **710, SRTL**
 Topics: **Pile Foundation**

B11/Segment/Cluster:
 In Time: **8:00 am**
 Out: **5:30 pm**

Conducted By: **RIAZ Hossain**

Sl. No.	Name	Designation	Signature
01	Md. Azarul Islam	Diller	
02	Md. Selim Mia	Welder	
03	Md. Faruk Mia	Fitter	
04	Md. Hridoy	Helper	
05	Md. Eatal Mia	"	
06	Md. Basar	"	
07	Badsha Mia	"	
08	Md. Babul	"	
09	Md. Rafiqul	"	
10	Md. Shofiqul	"	
11	Md. Awad	"	
12	Shahalom	"	
13	Md. Abadul	"	
14	dujal	"	

Signature of Trainer: 

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POWER TRANSMISSION & DISTRIBUTION IC

Issue 2-Rev 00
Ref: IM-B.1.2.2-A

PPT TALK REPORT AND ATTENDANCE SHEET

Name of the Project : 132 / 230 KV D/C ADB-1 Project.

Location : 23/2 RKT/L

Name of the Section In-charge : Rajak D

Name of the EHSO : Anoop AT

Name of the Sub-Contractor/Dept.: AL. Anasaf Traders

Number of workmen present :

Date & Time : 18/10/2023

Topics discussed :

- 0 Every day working are housekeeping
- 1) Working time must be PPE use
- 11) Height working time full body harness and full anastock clamp
- Properly use

Response of workmen : good

Remark / Any significant problem identified: NO

Signature:  Site Engineer

 EHSO

(P.T.O.)
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Issue 2-Rev 00
Ref: IM. 8.1.2.2-A

PEP TALK REPORT AND ATTENDANCE SHEET

Name of the Project : 132 / 230 KV D/C ADB-3 Project

Location : 27/3

Name of the Section In-charge : Rajak D

Name of the EHSO : Anoop AT

Name of the Sub-Contractor/Dept.: Sayceem En/Priz

Number of workmen present : 12

Date & Time :

Topics discussed :

Response of workmen : good

Remark / Any significant problem identified: NO

Signature: _____
Site Engineer

_____ EHSO

(P.T.O)
Page 1 of 2

Sensitivity: (L&T Construction Internal Use)

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ATTENDANCE SHEET FOR PEP-TALK

Date: 12/10/2023
Location: 09/12 RKT
Topics: Erection

In Time: 07.20 AM
Out Time: 05.28 PM

Conducted By: Barun Kumar

Sl. No.	Name	Designation	Signature
1	Shahid	Fitter	
2	Raju	"	
3	Likhon	"	
4	Snowlat Hossen	"	
5	Sujon	"	
6	Alamin Islam mithu	Helper	
7	Shohan	Fitter	
8	Johirul	Helper	
9	Shariq Hossen Siddik	Helper	
10	Shajol	"	
11	Abu Bokkor	Helper	
12	Shahin Islam	Helper	
13	Khairul	Helper	
14	Rakib	Helper	
15	Samsul	Helper	
16	Jawid	Hel	
17	Moinul	Helper	
18	Jakirul	Helper	
19	Rakib	"	
		Helper	

Signature of Trainer

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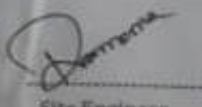
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POWER TRANSMISSION & DISTRIBUTION IC

Issue 2-Rev 00
Ref: IM-B.1.2.2-A

PEP TALK REPORT AND ATTENDANCE SHEET

Name of the Project	: 132 / 230 KV D/C ADB-3 Project.
Location	: 20/10, 200 KV
Name of the Section In-charge	: Rajak D
Name of the EHSO	: Anoop AT
Name of the Sub-Contractor/Dept:	Rumisa Enterprise
Number of workmen present	: 19
Date & Time	: 27/09/23, 08:42 Am
Topics discussed	: Benefit of Cotton hand gloves, Height work hazard, How to use tools tag lines ropes, House keeping, bull Dog clamp right Position.
Response of workmen	: good
Remark / Any significant problem identified:	No

Signature: 
Site Engineer


EHSO

(P.T.O)
Page 1 of 2

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L&T CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION IC

Issue 2-Rev 00

ATTENDANCE SHEET FOR PEP-TALK

Date: 27/09/23 In Time: 08:42 AM
Location: 29/0, 230KV Out Time: 05:49 PM
Topics: Erection sop

Conducted By: Raz Hossain

Sl. No.	Name	Designation	Signature
1	Shemul Biswas	Winch oper	Shemul
2	Jasim uddin	D. Master	Jasim
3	Md. Akash	Fitter	Md. Akash
4	Sabbir Hossen	"	Sabbir
5	Md. Asa	"	Md. Asa
6	Md. Sabur	"	Md. Sabur
7	Shohel Pramanik	"	Shohel
8	Md. Mohon	"	Md. Mohon
9	Shahadat Mondol	HELPER	Shahadat
10	Mokhasur Rahman	"	Mokhasur
11	Md. Murad	"	Md. Murad
12	Md. Robiul	fitter	Md. Robiul
13	Siddikur Rahman	Helper	Siddikur
14	Nasir uddin	"	Nasir
15	Md. Nayeem	"	Md. Nayeem
16	Md. Akad	"	Md. Akad
17	Md. Shatim	"	Md. Shatim
18	Md. Maruan	"	Md. Maruan
19	Arman	"	Arman

Signature of Trainer: _____

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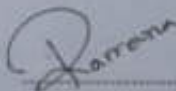
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POWER TRANSMISSION & DISTRIBUTION IC

Issue 2-Rev 00
Ref: IM-81.22-A

PEP TALK REPORT AND ATTENDANCE SHEET

Name of the Project	(132 / 230 KV D/C ADB-3 Project.
Location	6/0, 132 KV
Name of the Section in-charge	Ganesh Kumar S
Name of the EHSO	Anoop AT
Name of the Sub-Contractor/Dept.	Sayceem Engineering
Number of workmen present	14
Date & Time	06/10/2023, 9:52 Am
Topics discussed	Cardinal rules-1,2,3, benefit of PPE, Height work hazard, housekeeping, benefit of Tool box Parts guard, How to use fall arresters, Clamp, Tools lanyard, U clamp Position.
Response of workmen	Good
Remark / Any significant problem identified:	N O

Signature: 
Site Engineer


EHSO

(P.T.O)
Page 1 of 2

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**L&T CONSTRUCTION
POWER TRANSMISSION & DISTRIBUTION IC**

Issue 2-Rev

ATTENDANCE SHEET FOR PEP-TALK

Date: 06/11/2023
Location: G/O, 132 KV
Topic: Erection sop
In Time: 8.20 AM
Out Time: 5.15 PM

Conducted By: RIJAZ HOSSAIN

SL. No.	Name	Designation	Signature
1	Md. Shahadat Sardar	F	
2	Md. Mahfuz Alam Mitu	F	
3	Md. Miraz Hossen	F	
4	Md. Antore Ali	F	
5	Md. Azizul Islam	F	
6	Md. Sajib	F	
7	Jony Uddin	F	
8	Md. Musa	H	
9	Md. Saddam Hossen	H	
10	Abdullah Al Muhit	H	
11	Md. Saiful	F	
12	Md. Milton	H	
13	Md. Sagor	M	
14	Md. Sakil	H	
15			
16			
17			
18			
19			

Signature of Trainer

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Package 4

 TRANSRAIL Transrail Lighting Limited	Toolbox Meeting / Pep Talk	Format No: TRANSRAIL/CONST./HSE/TBM/016 Rev. No: 00 Date: 01.04.2021
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NAME OF THE PROJECT: ADB project Bangladesh (Scope-A) PROJECT CODE: GT-479

TOOL BOX/MEETING DATE: 24-11-23

LOC./VENUE: 9/1

TIME: 8:50 Am.

Number of workers Participation: 14 person

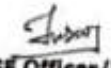
TOPIC Discussed: (As per work process) 1. * প্রাথমিক হাফট-১ন ওয়র্ক প্রকল্প
 2. * প্রকল্পের ২য়
 3. * First Aid Box প্রাথমিক হাফট
 4. * প্রকল্পের ২য়
 5. * প্রকল্পের ২য়

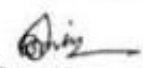
Remarks (if any):

Signature of workmen

Sl. No.	Name of worker Participation	Signature/Thumb	Sl. No.	Name of worker Participation	Signature/Thumb
1	মহম্মদ আলী	স্বাক্ষর	10	মহম্মদ আলী	স্বাক্ষর
2	মহম্মদ আলী	স্বাক্ষর	11	মহম্মদ আলী	স্বাক্ষর
3	মহম্মদ আলী	স্বাক্ষর	12	মহম্মদ আলী	স্বাক্ষর
4	মহম্মদ আলী	স্বাক্ষর	13	মহম্মদ আলী	স্বাক্ষর
5	মহম্মদ আলী	স্বাক্ষর	14	মহম্মদ আলী	স্বাক্ষর
6	মহম্মদ আলী	স্বাক্ষর	15	মহম্মদ আলী	স্বাক্ষর
7	মহম্মদ আলী	স্বাক্ষর	16	মহম্মদ আলী	স্বাক্ষর
8	মহম্মদ আলী	স্বাক্ষর	17	মহম্মদ আলী	স্বাক্ষর
9	মহম্মদ আলী	স্বাক্ষর	18	মহম্মদ আলী	স্বাক্ষর


**Signature of Site Supervisor/
Site Engg.**


HSE Officer/Engg.


Section/Project I/C

Note: Toolbox talk /Pep talk taking on daily basis at least 10-15 min before starting the work at site and it must be delivered by site supervisor/Engg.

HSE Officer will deliver the TBT at least 2 to 3 times at location in a week as well as Ensure the records of TBT by TLL team at location on daily basis.

Maintain the Theme based TBT topic during regular TBT.

CONTROLLED

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 TRANSRAIL Transrail Lighting Limited	Toolbox Meeting / Pep Talk	Format No: TRANSRAIL/CONST./HSE/TBM/016 Rev. No: 00 Date: 01.04.2021
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NAME OF THE PROJECT: ADB project Bangladesh (scope-A) PROJECT CODE: 01-49
 TOOL BOX/MEETING DATE: 25-11-23
 LOC./VENUE: 414
 TIME: 0:30 AM
 Number of workers Participation: 14 person.
 TOPIC Discussed: (As per work process) 1. ← কাজের সাজগুজ নিয়মিত করে রাখা
 2. ← সুরক্ষা চশমা পরা।
 3.
 4. ← নিয়মিত লম্বা স্ক্রাট দিয়ে পরিষ্কার
 5. কাজে যত্ন সহকারে করা।

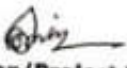
Remarks (if any)

Signature of workmen

Sl. No.	Name of worker Participation	Signature/Thumb	Sl. No.	Name of worker Participation	Signature/Thumb
1	শ্রী. হারুন	হারুন	10	মিলন	মিলন
2	সুনীল	সুনীল	11	জাহান	জাহান
3	মিলন	মিলন	12	সাহাব	সাহাব
4	মাহবুব	মাহবুব	13	হুমায়ূন	হুমায়ূন
5	হাসান	হাসান	14	মাহমুদ	মাহমুদ
6	রনি	রনি	15		
7	সাহু	সাহু	16		
8	মাহমুদ	মাহমুদ	17		
9	মিহির	মিহির	18		


 Signature of Site Supervisor/
Site Engg.


 HSE Officer/Engg.


 Section/Project I/C

Note: Toolbox talk /Pep talk taking on daily basis at least 10-15 min before starting the work at site and it must be delivered by site supervisor/Engg.

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Maintain the Theme based TBT topic during regular TBT.

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 TRANSRAIL Transrail Lighting Limited	Toolbox Meeting / Pep Talk	Format No: TRANSRAIL/CONST./HSE/TBM/016 Rev. No: 00 Date: 01.04.2021
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NAME OF THE PROJECT: ADB project Bangladesh (scope-1) PROJECT CODE: GT-479
 TOOL BOX/MEETING DATE: 26-11-23
 LOC./VENUE: 4/1
 TIME: 9:00 AM
 Number of workers Participation: 15 person
 TOPIC Discussed: (As per work process) 1. - টাউনশিপের কাজে জোরে নিয়ন্ত্রণ করা
 2. -
 3. - টাউনশিপের কাজে জোরে করা ২০।
 4. - টাউনশিপের কাজে জোরে করা
 5. - কাজে জোরে করা ২০।

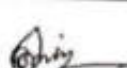
Remarks (if any):

Signature of workmen

Sl. No.	Name of worker Participation	Signature/Thumb	Sl. No.	Name of worker Participation	Signature/Thumb
1	মোঃ হুমায়ুন	হুমায়ুন	10	মোঃ হুমায়ুন	হুমায়ুন
2	মোঃ হুমায়ুন	হুমায়ুন	11	মোঃ হুমায়ুন	হুমায়ুন
3	মোঃ হুমায়ুন	হুমায়ুন	12	মোঃ হুমায়ুন	হুমায়ুন
4	মোঃ হুমায়ুন	হুমায়ুন	13	মোঃ হুমায়ুন	হুমায়ুন
5	মোঃ হুমায়ুন	হুমায়ুন	14	মোঃ হুমায়ুন	হুমায়ুন
6	মোঃ হুমায়ুন	হুমায়ুন	15	মোঃ হুমায়ুন	হুমায়ুন
7	মোঃ হুমায়ুন	হুমায়ুন	16		
8	মোঃ হুমায়ুন	হুমায়ুন	17		
9	মোঃ হুমায়ুন	হুমায়ুন	18		


 Signature of Site Supervisor/
 Site Engg.


 HSE Officer/Engg.


 Section/Project I/C

Note: Toolbox talk /Pep talk taking on daily basis at least 10-15 min before starting the work at site and it must be delivered by site supervisor/Engg.

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Maintain the Theme based TBT topic during regular TBT.

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 TRANSRAIL Transrail Lighting Limited	Toolbox Meeting / Pep Talk	Format No: TRANSRAIL/CONST./HSE/TBM/016 Rev. No: 00 Date: 01.04.2021
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NAME OF THE PROJECT: ADB project Bangladesh (Scope-A) PROJECT CODE: G-179

TOOL BOX/MEETING DATE: 27-11-23

LOC./VENUE: 4/0

TIME: 8:58 AM

Number of workers Participation: 14 persons.

TOPIC Discussed: (As per work process)

1. * - ইত্যাদি উক্ত ক্ষেত্রে মোকদ্দম
2. * - ইত্যাদি ক্ষেত্রে মোকদ্দম মোকদ্দম ২২০।
3. * - ইত্যাদি ক্ষেত্রে মোকদ্দম মোকদ্দম ২২০।
4. * - ইত্যাদি ক্ষেত্রে মোকদ্দম মোকদ্দম ২২০।
5. * - ইত্যাদি ক্ষেত্রে মোকদ্দম মোকদ্দম ২২০।

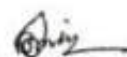
Remarks (if any):

Signature of workmen

Sl. No.	Name of worker Participation	Signature/Thumb	Sl. No.	Name of worker Participation	Signature/Thumb
1	শাহিন	শাহিন	10	শাহিন	শাহিন
2	শাহিন	শাহিন	11	শাহিন	শাহিন
3	শাহিন	শাহিন	12	শাহিন	শাহিন
4	শাহিন	শাহিন	13	শাহিন	শাহিন
5	শাহিন	শাহিন	14	শাহিন	শাহিন
6	শাহিন	শাহিন	15		
7	শাহিন	শাহিন	16		
8	শাহিন	শাহিন	17		
9	শাহিন	শাহিন	18		


**Signature of Site Supervisor/
Site Engg.**


HSE Officer/Engg.


Section/Project I/C

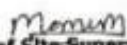
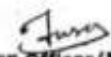
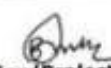
Note: Toolbox talk /Pep talk taking on daily basis at least 10-15 min before starting the work at site and it must be delivered by site supervisor/Engg.

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Maintain the Theme based TBT topic during regular TBT.

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 TRANSRAIL Transrail Lighting Limited	Toolbox Meeting / Pep Talk	Format No: TRANSRAIL/CONST./HSE/TBM/018 Rev. No: 00 Date: 01.04.2021																																																												
NAME OF THE PROJECT: <u>ADB Project Bangladesh (scope-D)</u> PROJECT CODE: <u>Gr-477</u> TOOL BOX/MEETING DATE: <u>13-12-2023</u> LOC./VENUE: <u>3/3</u> TIME: <u>07:10 AM.</u> Number of workers Participation: <u>11 person</u> TOPIC Discussed: (As per work process) 1. <u>সেফটি প্রস্তুতি</u> 2. <u>সাইট পরিদর্শন</u> 3. <u>কাজের নির্দেশনা</u> 4. <u>সুস্থতা</u> 5. <u>অন্যান্য বিষয়</u>																																																														
Remarks (if any) Signature of workmen																																																														
<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Sl. No.</th> <th>Name of worker Participation</th> <th>Signature/Thumb</th> <th>Sl. No.</th> <th>Name of worker Participation</th> <th>Signature/Thumb</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>শ্রীমান</td> <td>শ্রীমান</td> <td>10</td> <td>শ্রীমান</td> <td>শ্রীমান</td> </tr> <tr> <td>2</td> <td>শ্রীমান</td> <td>শ্রীমান</td> <td>11</td> <td>শ্রীমান</td> <td>শ্রীমান</td> </tr> <tr> <td>3</td> <td>শ্রীমান</td> <td>শ্রীমান</td> <td>12</td> <td></td> <td></td> </tr> <tr> <td>4</td> <td>শ্রীমান</td> <td>শ্রীমান</td> <td>13</td> <td></td> <td></td> </tr> <tr> <td>5</td> <td>শ্রীমান</td> <td>শ্রীমান</td> <td>14</td> <td></td> <td></td> </tr> <tr> <td>6</td> <td>শ্রীমান</td> <td>শ্রীমান</td> <td>15</td> <td></td> <td></td> </tr> <tr> <td>7</td> <td>শ্রীমান</td> <td>শ্রীমান</td> <td>16</td> <td></td> <td></td> </tr> <tr> <td>8</td> <td>শ্রীমান</td> <td>শ্রীমান</td> <td>17</td> <td></td> <td></td> </tr> <tr> <td>9</td> <td>শ্রীমান</td> <td>শ্রীমান</td> <td>18</td> <td></td> <td></td> </tr> </tbody> </table>			Sl. No.	Name of worker Participation	Signature/Thumb	Sl. No.	Name of worker Participation	Signature/Thumb	1	শ্রীমান	শ্রীমান	10	শ্রীমান	শ্রীমান	2	শ্রীমান	শ্রীমান	11	শ্রীমান	শ্রীমান	3	শ্রীমান	শ্রীমান	12			4	শ্রীমান	শ্রীমান	13			5	শ্রীমান	শ্রীমান	14			6	শ্রীমান	শ্রীমান	15			7	শ্রীমান	শ্রীমান	16			8	শ্রীমান	শ্রীমান	17			9	শ্রীমান	শ্রীমান	18		
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 TRANSRAIL Transrail Lighting Limited	Toolbox Meeting / Pep Talk	Format No: TRANSRAIL/CONST./HSE/TBM/016 Rev. No: 00 Date: 01.04.2021			
NAME OF THE PROJECT: ADB project Bangladesh (scope-D) PROJECT CODE: G-479 TOOL BOX/MEETING DATE: 16-12-23 LOC./VENUE: 3/10 TIME: 9:35 am Number of workers Participation: 11 person TOPIC Discussed: (As per work process)					
1. ... 2. ... 3. ... 4. ... 5. ...					
Remarks (if any) Signature of workmen					
Sl. No.	Name of worker Participation	Signature/Thumb	Sl. No.	Name of worker Participation	Signature/Thumb
1	Mr. ...	...	10	...	...
2	Mr. ...	...	11	...	...
3	Mr. ...	...	12		
4	Mr. ...	...	13		
5	Mr. ...	...	14		
6	...	...	15		
7	...	...	16		
8	...	...	17		
9	...	...	18		
Signature of Site Supervisor/ Site Engg.			HSE Officer/Engg.		
Section/Project I/C					
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Bhola 230/33 KV GIS Substation

অধিবৃত্তি সম্পর্কিত অধিগ্রহণের প্রকল্প
প্রকল্পের নাম : ঢাকা ২৩০/৩৩ কেভি GIS উপকেন্দ্র নির্মাণ প্রকল্প

এম.এ. কোম. নং: ০১/০৪/২০২০-২১

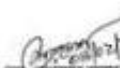
জেলা : ঢাকা উপজেলা : ঢাকা সদর মৌজা : পূর্ব চরকাঠী জি.এম.নং: ৮১

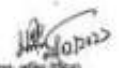
অধিগ্রহণ		অধিগ্রহণের ক্ষেত্র		অধিগ্রহণের ক্ষেত্র		অধিগ্রহণের ক্ষেত্র		অধিগ্রহণের ক্ষেত্র	
ক্রমিক	নাম	একক	মূল্য	মূল্য	মূল্য	মূল্য	মূল্য	মূল্য	মূল্য
১	২	৩	৪	৫	৬	৭	৮	৯	১০
মূল	২.৪২	২৪,২১,৭১০/-	২২,৭১,৭১০/-	২২,৭১,৭১০/-	২২,৭১,৭১০/-	২২,৭১,৭১০/-	২২,৭১,৭১০/-	২২,৭১,৭১০/-	২২,৭১,৭১০/-
পুষ্টি	৩.৪০	৩৪,৩১,৭১০/-	৩২,৭১,৭১০/-	৩২,৭১,৭১০/-	৩২,৭১,৭১০/-	৩২,৭১,৭১০/-	৩২,৭১,৭১০/-	৩২,৭১,৭১০/-	৩২,৭১,৭১০/-
মিলি	৩.৪০	৩৪,৩১,৭১০/-	৩২,৭১,৭১০/-	৩২,৭১,৭১০/-	৩২,৭১,৭১০/-	৩২,৭১,৭১০/-	৩২,৭১,৭১০/-	৩২,৭১,৭১০/-	৩২,৭১,৭১০/-
পুষ্টি	৩.৪০	৩৪,৩১,৭১০/-	৩২,৭১,৭১০/-	৩২,৭১,৭১০/-	৩২,৭১,৭১০/-	৩২,৭১,৭১০/-	৩২,৭১,৭১০/-	৩২,৭১,৭১০/-	৩২,৭১,৭১০/-
জমি/পানি	৩.৪০	৩৪,৩১,৭১০/-	৩২,৭১,৭১০/-	৩২,৭১,৭১০/-	৩২,৭১,৭১০/-	৩২,৭১,৭১০/-	৩২,৭১,৭১০/-	৩২,৭১,৭১০/-	৩২,৭১,৭১০/-
	৩.৪০	৩৪,৩১,৭১০/-	৩২,৭১,৭১০/-	৩২,৭১,৭১০/-	৩২,৭১,৭১০/-	৩২,৭১,৭১০/-	৩২,৭১,৭১০/-	৩২,৭১,৭১০/-	৩২,৭১,৭১০/-

১০(১) বার মোটেরক মহাপ্রাণের মূল্যের উপর ১০০% অতিরিক্ত অধিগ্রহণ	১০(২) বার মোটেরক মহাপ্রাণের মূল্যের উপর ১০০% অতিরিক্ত অধিগ্রহণ	১০(৩) বার মোটেরক মহাপ্রাণের মূল্যের উপর ১০০% অতিরিক্ত অধিগ্রহণ	১০(৪) বার মোটেরক মহাপ্রাণের মূল্যের উপর ১০০% অতিরিক্ত অধিগ্রহণ	১০(৫) বার মোটেরক মহাপ্রাণের মূল্যের উপর ১০০% অতিরিক্ত অধিগ্রহণ	১০(৬) বার মোটেরক মহাপ্রাণের মূল্যের উপর ১০০% অতিরিক্ত অধিগ্রহণ	১০(৭) বার মোটেরক মহাপ্রাণের মূল্যের উপর ১০০% অতিরিক্ত অধিগ্রহণ
১১	১২	১৩	১৪	১৫	১৬	১৭
২২,৭১,৭১০/-	২২,৭১,৭১০/-	২২,৭১,৭১০/-	২২,৭১,৭১০/-	২২,৭১,৭১০/-	২২,৭১,৭১০/-	২২,৭১,৭১০/-

কমঃ (১০০) বার মোটেরক
মহাপ্রাণের মূল্যের উপর
১০০% অতিরিক্ত অধিগ্রহণ

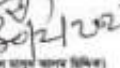

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